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Monthly Means of Temperature, Salinity and Sigma-t for the Gulf of St. Lawrence

B. Petrie

Physical and Chemical Sciences Branch
Scotia-Fundy Region
Department of Fisheries and Oceans

Bedford Institute of Oceanography
P.O. Box 1006
Dartmouth, Nova Scotia
Canada B2Y 4A2

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B. Petrie

Physical and Chemical Sciences Branch
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Bedford Institute of Oceanography
P.O. Box 1006
Dartmouth, Nova Scotia
Canada, B2Y 4A2

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ABSTRACT

Petrie, B. 1990. Monthly means of temperature, salinity and sigma-t for the Gulf of St. Lawrence. Can. Tech. Rep. Hydrogr. Ocean Sci. No. 126: iv + 137 pp.

Monthly means of temperature, salinity and sigma-t for the Gulf of St. Lawrence are presented. The Gulf was divided into 17 areas extending from the Estuary to the Strait of Belle Isle and to Cabot Strait. The means and standard deviations were calculated at standard depths (0, 10, 20, 30, 50, 100, 125, 150, 175, 200, 225, 250, 300 and 400m) from archived bottle and CTD data collected between 1915 and 1987. The data are presented in tables for all areas and as time series plots at selected depths for several areas. In addition, where sufficient data were available, the annual and semi-annual components were computed using harmonic analysis.

RÉSUMÉ

Petrie, B. 1990. Monthly means of temperature, salinity and sigma-t for the Gulf of St. Lawrence. Can. Tech. Rep. Hydrogr. Ocean Sci. No. 126: iv + 137 pp.

On présente les moyennes mensuelles de température, de salinité et de densité sigma-t du golfe du Saint-Laurent, qui a été divisé en 17 zones allant de l'estuaire du fleuve aux détroits de Belle-Isle et de Cabot. Les moyennes et les écarts standard à des profondeurs standard (0, 10, 20, 30, 50, 100, 125, 150, 175, 200, 225, 250, 300 et 400m) ont été établis à partir d'échantillons archivés et de données sur la conductivité, sur la température et sur la profondeur recueillies de 1915 à 1987. Les résultats sont présentés sous formes de tableaux pour toutes les zones et de représentations graphiques de séries chronologiques pour des profondeurs données dans plusieurs zones. En outre, dans les cas où on disposait de suffisamment de données, on a produit des chiffres annuels et semi-annuels grâce à des analyses harmoniques.

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Introduction

This report presents the monthly means and standard deviations of temperature and salinity data collected in the Gulf of St. Lawrence (Fig 1a). Statistics of sigma-t, derived from the data, are compiled as well. Weiler and Keeley (1980) have presented an atlas of monthly sea surface temperatures for the Gulf. Bugden (1981) derived monthly temperature and salinity statistics for 4 depth intervals in 4 large areas of the Gulf. He used these values to examine the circulation, mixing, heat and salt budgets of the region. Bugden et al. (1982) examined between year differences of hydrographic properties in the region. Previous reports (Drinkwater and Trites, 1986, 1987) have compiled similar statistics for the continental shelf and slope regions off Newfoundland and Nova Scotia.The motivation for the present work originated with the occurrence of domoic acid in mussels from the southern Gulf. It was realized that a more detailed atlas of the mean hydrographic conditions in the region would be useful.

Data and Analysis

Archived temperature and salinity data from the Gulf of St. Lawrence (1915 - 1987) were analyzed by the Marine Environmental Data Service (MEDS) in Ottawa. Temperatures were measured with reversing thermometers and salinities were determined from bottle samples by titration or with salinometers. Data collected with CTD's were included in the analysis. All of the data were interpolated to standard depths by MEDS. A significant number of dubious measurements were edited or removed from the archived database. Some of the problems appeared to be due to shifted decimal points, incorrectly recorded geographic positions, chlorinity listed as salinity for earlier data sets, and an unusual number of zeros recorded as measurements. In the Estuary it appeared that a large number of readings from rivers were included in the database. Boundaries for that area were redefined to eliminate these measurements before the final statistical compilation.

The Gulf was divided into 17 areas from the Estuary to the Strait of Belle Isle and Cabot Strait (Fig. 1b). The latitudes and longitudes of the corners defining the areas are listed in Table 1, their place names in Table 2. The areas were selected on the basis of topography, the physical oceanography of the Gulf and the availability of sufficient data to derive means and standard deviations.

The number of temperature and salinity measurements for each area is shown in Fig. 2. The areas with the greatest number of samples include the Estuary, Gaspé, most of the southern Gulf and Cabot Strait; areas with the least amount of data include the central Laurentian Channel and the northeastern Gulf adjacent to Québec.

The temporal distribution of surface data is shown in Fig. 3. Most of the data were collected from May to September with a small peak in November probably due to the ice forecast cruises. The number of stations within a month ranged from about 300 in March to 6000 in August.

The monthly mean temperatures, salinities and sigma-t values, their standard deviations and the number of data points at standard depths for each area are compiled in Appendix 1.

The time and depth distributions of temperature and salinity are shown in Fig. 4a-f for the areas Cabot Strait West, Cabot Strait East, Esquiman Channel Québec Shore, Estuary, Northwest Magdalen Shallows and Northumberland Strait East. All areas show the development of a shallow warm layer in the summer with the lowest average summertime temperatures occurring in the Estuary and the highest in the Shallows. Freshening of the near-surface waters is apparent, particularly in the Estuary in the spring. The freshening generally occurs later in other areas, in late August or September in Cabot Strait for example. The differences in the time of occurrence of low salinity throughout the Gulf is due to advection of the spring runoff, dominated by the St. Lawrence River, from one area to another.

The annual variations of the temperature and salinity at selected depths for the same areas are shown in Fig. 5a-f. The largest variations occur in the surface, decreasing with depth so that the variability is considerably reduced at 100m.

Monthly plan view maps of the mean temperature and salinity for the Gulf at 0m (Fig. 6a-d), 30m (Fig. 7a-d), 50m (Fig. 8a-d), 100m (Fig. 9a-d) and 150m (Fig. 10a-d) were produced from the statistics of the hydrographic data. The contours, as well as the mean data values, are displayed on each map. An asterisk beside any value indicates that the mean was formed from less than 5 points.

A number of features of the hydrography of the Gulf are evident from these maps. From May to November a strong gradient (Fig. 6) of surface temperature is evident in the Magdalen Shallows. The Estuary consistently has the coldest water in the Gulf during the summer due to enhanced upwelling and vertical mixing of cooler, deeper waters. The freshening of the surface waters in April and May is evident in the Estuary, the result of spring runoff dominated by the St. Lawrence River.

The temperature distribution at 30m (Fig. 7) contrasts with that at the surface. For example, in July, while surface temperatures in the Magdalen

Shallows range from 14 to 16 °C, 30m temperatures are only about 2°C. Maximum temperatures at 30m occur in October, the result of downward mixing of warmer surface waters. The marked surface salinity minimum in the Estuary in spring is not as dramatic at 30m. A strong salinity gradient is seen in the Magdalen Shallows throughout most of the year.

At the deeper depths (50, 100 and 150m; Fig. 8-10), the temporal and spatial changes of temperature and salinity are less than at the surface and 30m. At 50m, temperatures are generally less than 2°C most of the year. Below 50m, the temperature rises to 2-3°C at 150m due to the influence of slope water from the Atlantic Ocean entering the Gulf through Cabot Strait. Salinity, like temperature, shows smaller changes both spatially and temporally at the deeper depths.

To quantify the annual cycle evident at shallower depths, a harmonic analysis (Smith, 1983) was carried out on the monthly means and standard deviations of temperature and salinity for all areas with sufficient data. A fit of the annual mean, the annual and semi-annual harmonics to the 0m values from area 1 is shown in Fig. 11a-d. The calculations for all areas are tabulated in Appendix 2. The phase corresponds to the time in months when the maximum of the particular harmonic occurs. Harmonic amplitudes generally decrease with depth. Phases generally increase with depth demonstrating the effect of vertical mixing.

Caution should be exercised when using the annual cycles compiled in Appendix 2. For some areas (e. g. area 14 at 10m) the annual cycle is large enough to give a minimum temperature below the freezing point of seawater. This situation arises when data are missing for the winter months and the spring to fall increase and decrease of temperature dominate the record. In such circumstances the least squares fit to a reduced data set can result in an overestimate of the annual cycle. When using the annual or semi-annual cycles compiled in Appendix 2, reference should be made to Appendix 1 to determine the data coverage

Acknowledgements

I thank Miriam Morison of MEDS for the effort she provided running, rerunning and editing the Gulf hydrographic data base in an iterative process over the phone and by mail over a period of six months. I also thank Ken Drinkwater, Ron Trites and Gary Bugden for their advice and guidance in dividing the Gulf into the 17 areas. K. D. and G. B. also provided useful reviews. Finally I thank Francis Jordan and Bob Lively for their technical support preparing maps and appendices.

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Table 1

The latitudes and longitudes of the corners of the areas shown in Fig. 1b.

Area	Latitude (°N), Longitude (°W)
1	47°12′,59°24′; 46°44′,60°19′; 47°02′,60°36′; 47°40′,60°36′; 47°58′,60°59′; 48°18′,60°41′.
2	47°28′,59°00′; 47°12′,59°24′; 48°18′,60°41′; 48°29′,60°31′; 48°28′,59°17′.
3	51°17′,56°41′; 48°28′,59°17′; 48°29′,60°31′; 49°50′,59°12′; 51°19′,56°55′.
4	51°19′,56°55′; 49°50′,59°12′; 48°29′,60°31′; 50°14′,60°38′; 51°26′,57°54′.
5	50°14′,60°38′; 48°29′,60°31′; 49°05′,61°43′; 49°55′,64°00′; 50°17′,64°00′.
6	50°17′,64°00′; 49°12′,64°00′; 49°30′,65°00′; 49°30′,67°13′; 50°11′,66°41′.
7	49°00′,67°10′; 49°00′,68°30′; 48°40′,69°00′; 48°10′,69°35′; 48°10′,69°20′; 48°20′,69°00′.
8	48°56′,63°10′; 48°30′,63°10′; 48°30′,64°13′; 48°51′,64°13′; 48°50′,67°13′; 49°31′,67°13′; 49°30′,65°00′.
9	49°05′,61°43′; 48°29′,60°31′; 48°18′,60°41′; 48°56′,63°10′; 49°12′,64°00′; 49°55′,64°00′.
10	48°18′,60°41′; 47°58′,60°59′; 48°30′,63°10′; 48°56′,63°10′.
11	48°30′,63°10′; 47°43′,64°00′; 47°19′,64°00′; 47°18′,64°56′; 48°30′,64°13′.
12	48°13′,62°00′; 47°23′,62°00′; 47°23′,64°00′; 47°43′,64°00′; 48°30′,63°10′.

13	47°40′, 60°36′; 47°22′, 60°36′; 47°23′, 62°00′; 48°13′, 62°00′; 47°58′, 60°59′.
14	47°19′, 64°00′; 47°04′, 64°00′; 46°42′, 64°25′; 46°13′, 63°40′; 46°07′, 63°47′; 46°14′, 64°35′; 47°18′, 64°56′.
15	47°23′, 62°00′; 46°27′, 62°00′; 46°34′, 63°41′; 47°04′, 64°04′; 47°23′, 64°00′.
16	47°22′, 60°36′; 47°02′, 60°36′; 46°27′, 61°00′; 46°27′, 62°00′; 47°23′, 62°00′.
17	47°27′, 61°00′; 45°35′, 61°34′; 45°55′, 64°00′; 46°13′, 63°40′; 46°13′, 62°25′; 46°27′, 62°00′.

Table 2

Names of areas shown in Fig. 1

1. CABOT STRAIT WEST
2. CABOT STRAIT EAST
3. ESQUIMAN CHANNEL, NFLD. SHORE
4. ESQUIMAN CHANNEL, QUÉBÉC SHORE
5. JACQUES CARTIER PASSAGE
6. NORTHWEST GULF
7. ESTUARY
8. GASPÉ
9. LAURENTIAN CHANNEL ANTICOSTI
10. LAURENTIAN CHANNEL CENTRAL
11. SHEDIAC VALLEY
12. NORTHWEST MAGDALEN SHALLOWS
13. NORTHEAST MAGDALEN SHALLOWS
14. NORTHUMBERLAND STRAIT WEST
15. SOUTHERN MAGDALEN SHALLOWS
16. CAPE BRETON CHANNEL
17. NORTHUMBERLAND STRAIT EAST

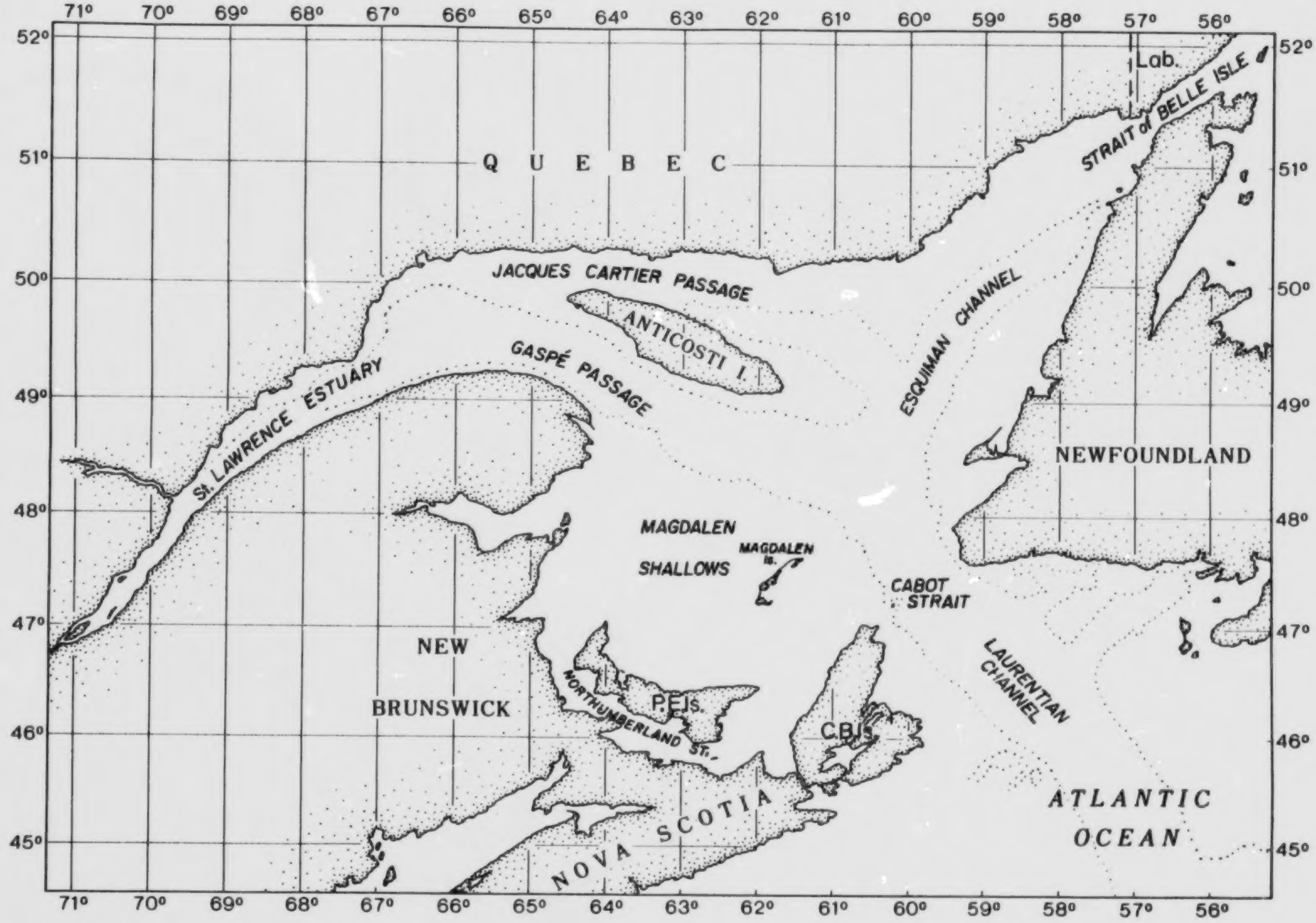

71°
70°
69°
68°
67°
66°
65°
64°
63°
62°
61°
60°
59°
58°
57°
56°
52°
51°
50°
49°
48°
47°
46°
45°
Lab.
STRAIT of BELLE ISLE
QUEBEC
JACQUES CARTIER PASSAGE
ANTICOSTI I.
ESQUIMAN CHANNEL
GASPÉ PASSAGE
St. LAWRENCE ESTUARY
NEWFOUNDLAND
MAGDALEN
SHALLOWS
MAGDALEN Is.
CABOT STRAIT
LAURENTIAN CHANNEL
NEW
BRUNSWICK
P.E.Is.
NORTHUMBERLAND St.
C.B.Is.
NOVA SCOTIA
ATLANTIC
OCEAN

Fig. 1a. General map of the Gulf showing the place names used in the text.

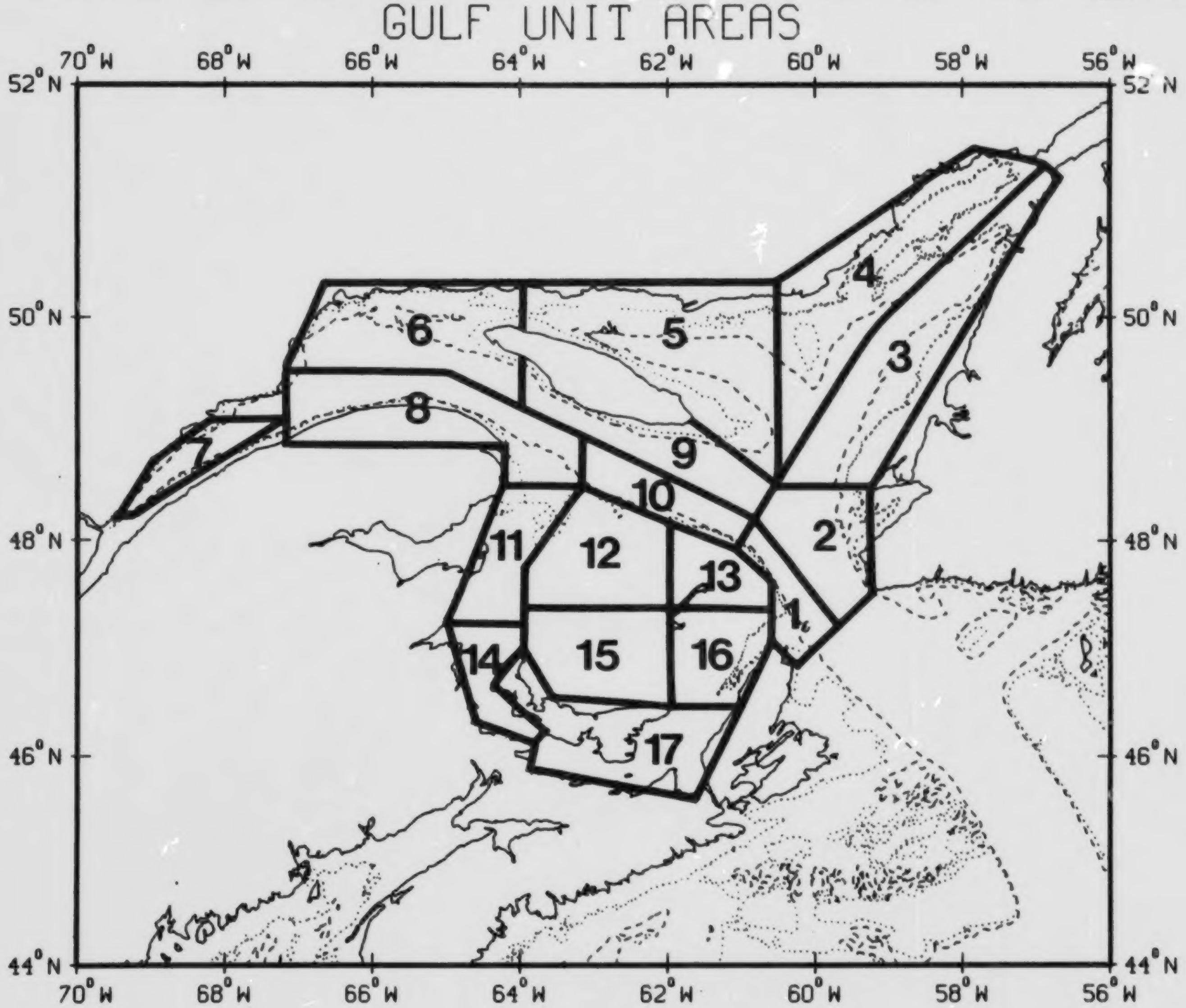

GULF UNIT AREAS
70° W
68° W
66° W
64° W
62° W
60° W
58° W
56° W
52° N
50° N
48° N
46° N
44° N
1
2
3
4
5
6
8
9
10
11
12
13
14
15
16
17

Fig. 1b. The Gulf of St. Lawrence showing the areas for which mean temperature and salinity were calculated.

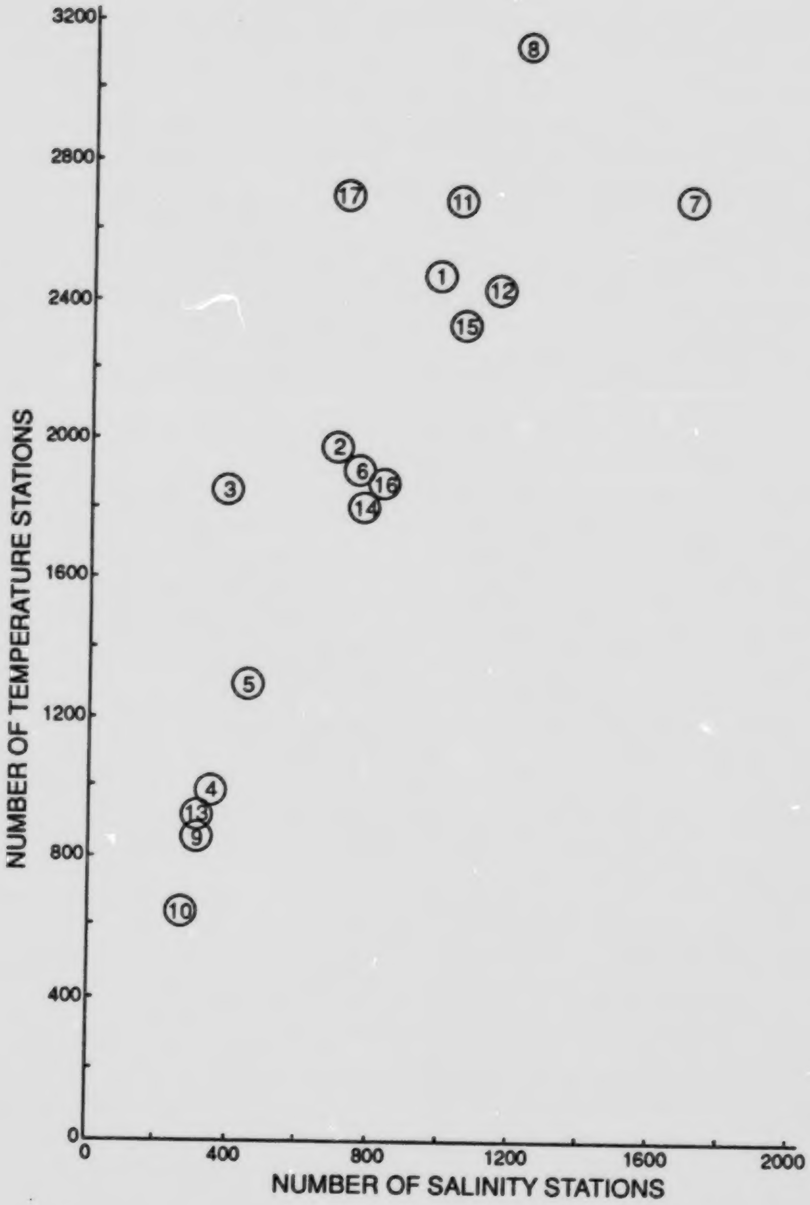


Fig. 2. Number of temperature and salinity stations at 0m for the 17 areas. The number represents the designated area.

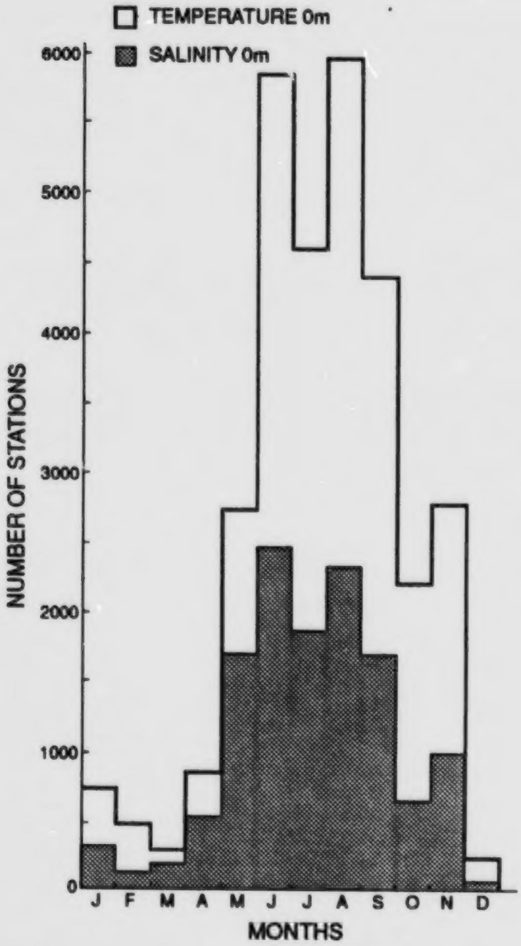


Fig. 3. A histogram of the total number of surface observations by month for temperature and salinity.

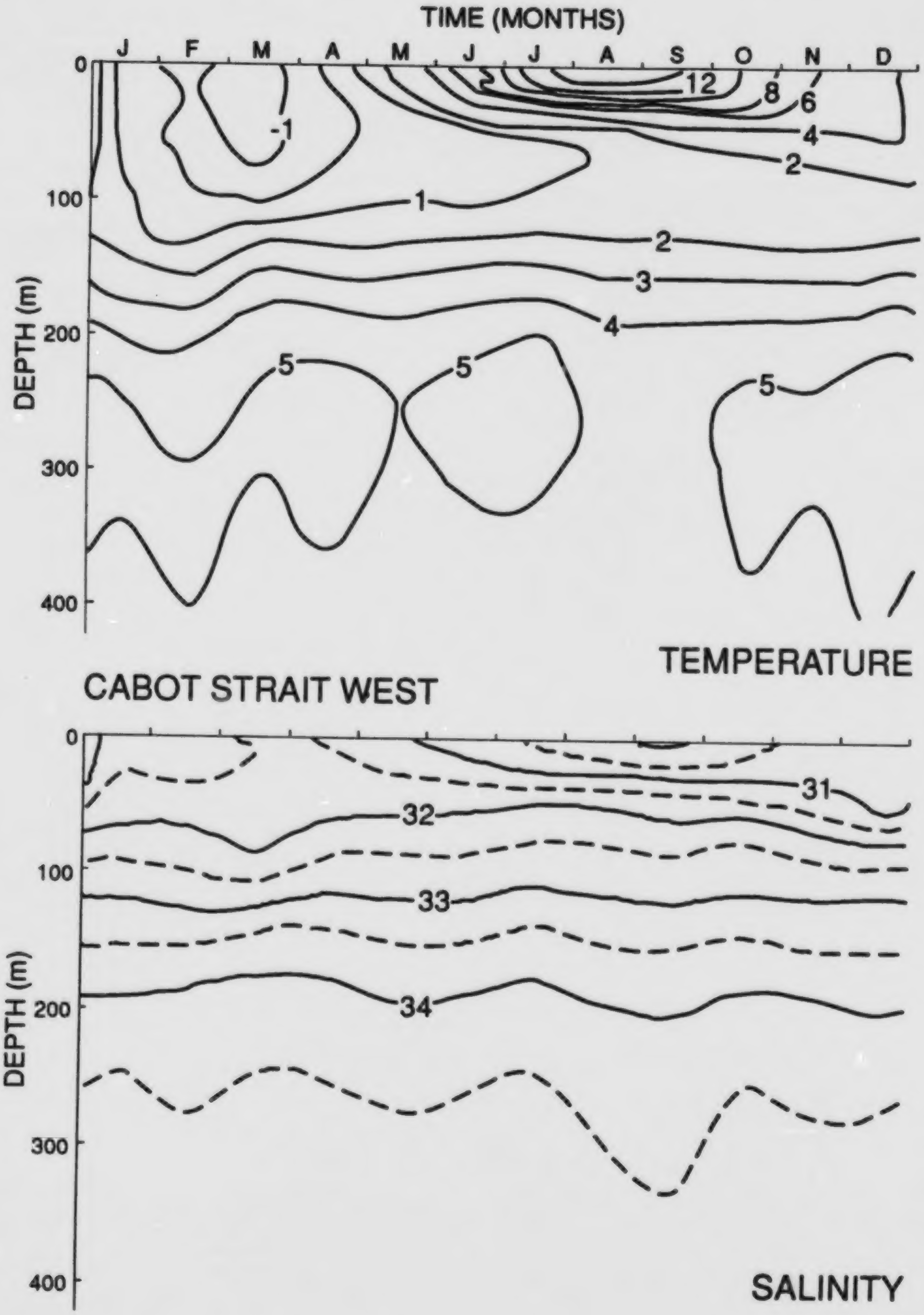


Fig. 4a. The time-depth distribution of the monthly mean temperature and salinity for area 1, Cabot Strait West.

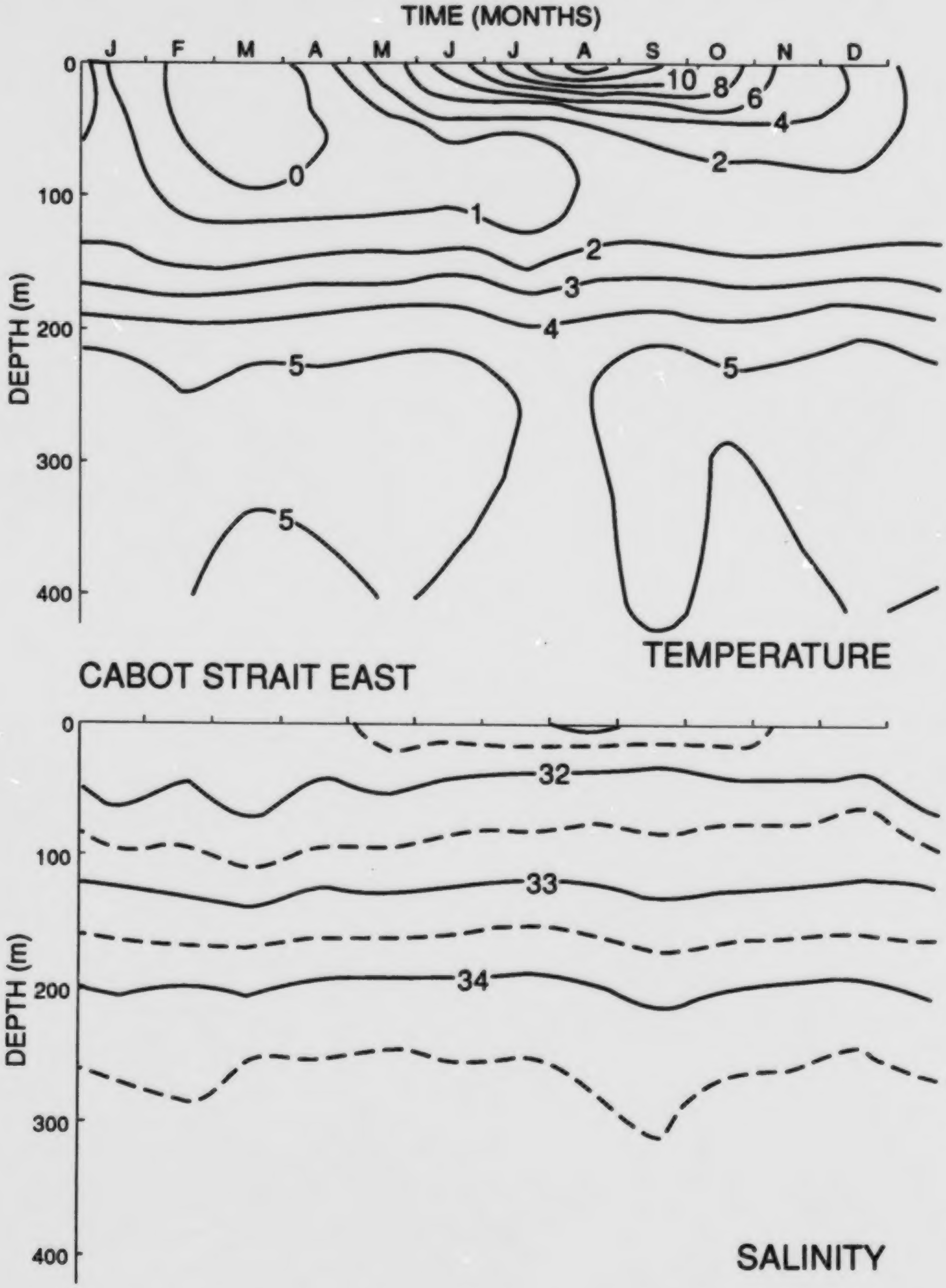


Fig. 4b. The time-depth distribution of the monthly mean temperature and salinity for area 2, Cabot Strait East.

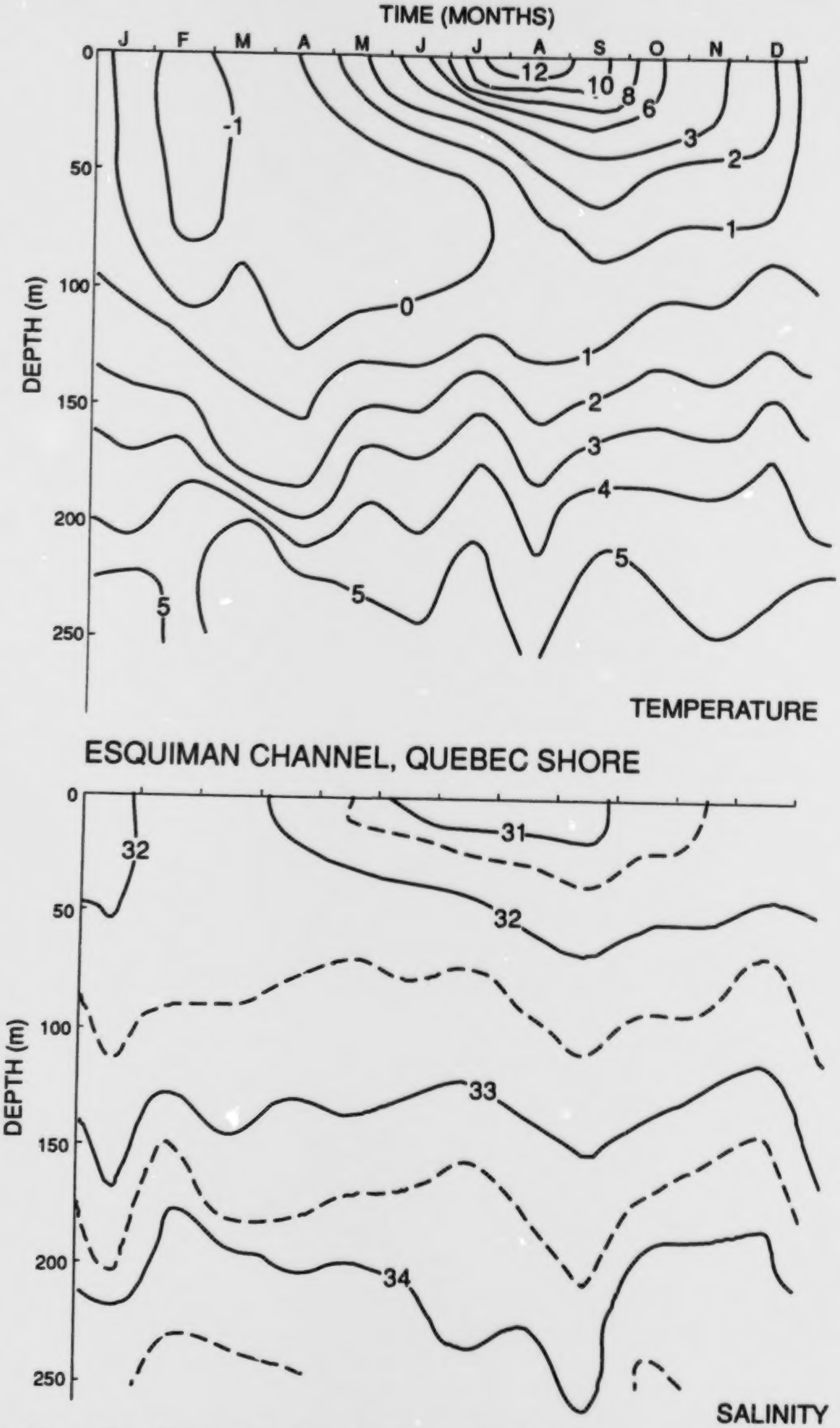


Fig. 4c. The time-depth distribution of the monthly mean temperature and salinity for area 4, Esquiman Channel, Québec Shore.

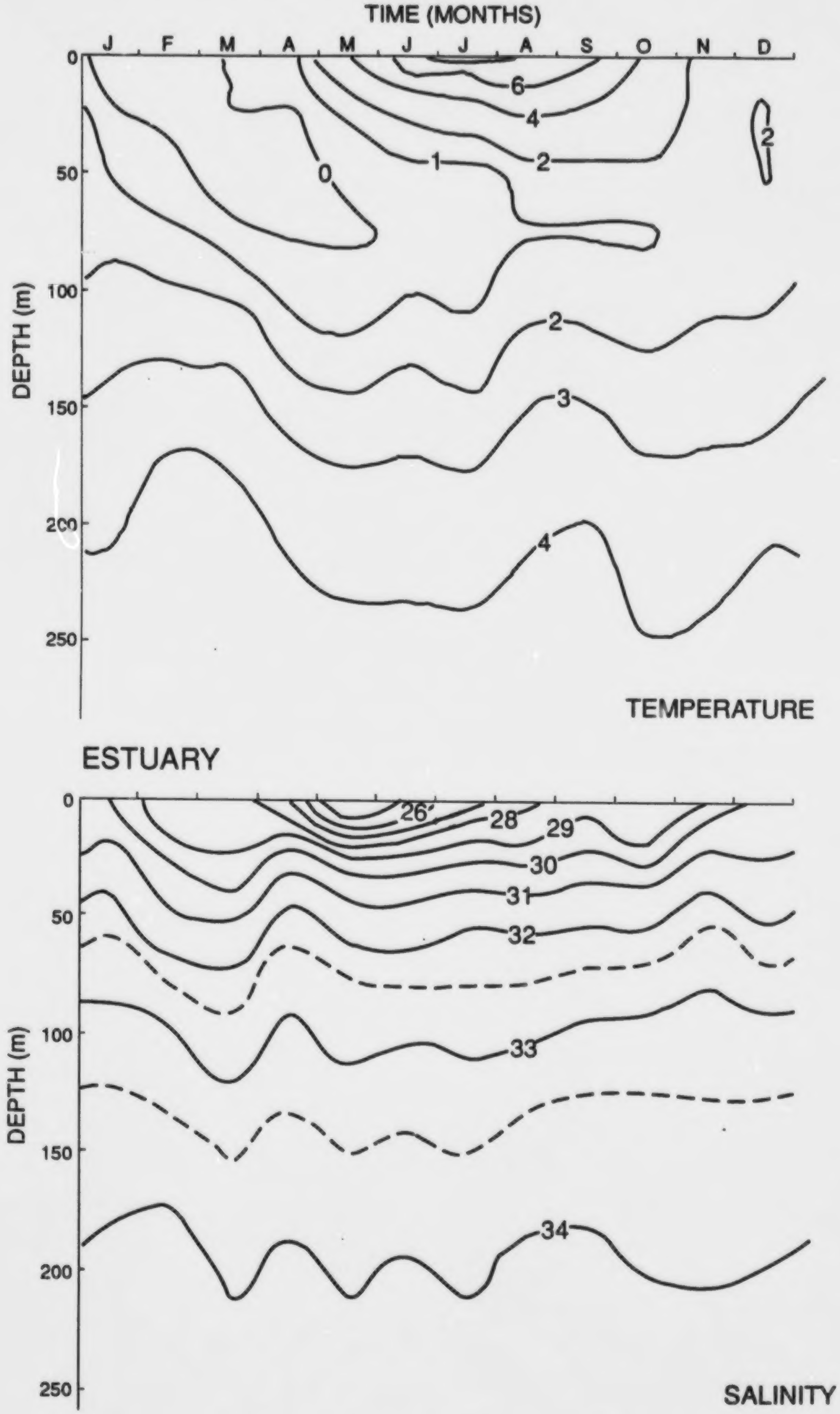


Fig. 4d. The time-depth distribution of the monthly mean temperature and salinity for area 7, Estuary.

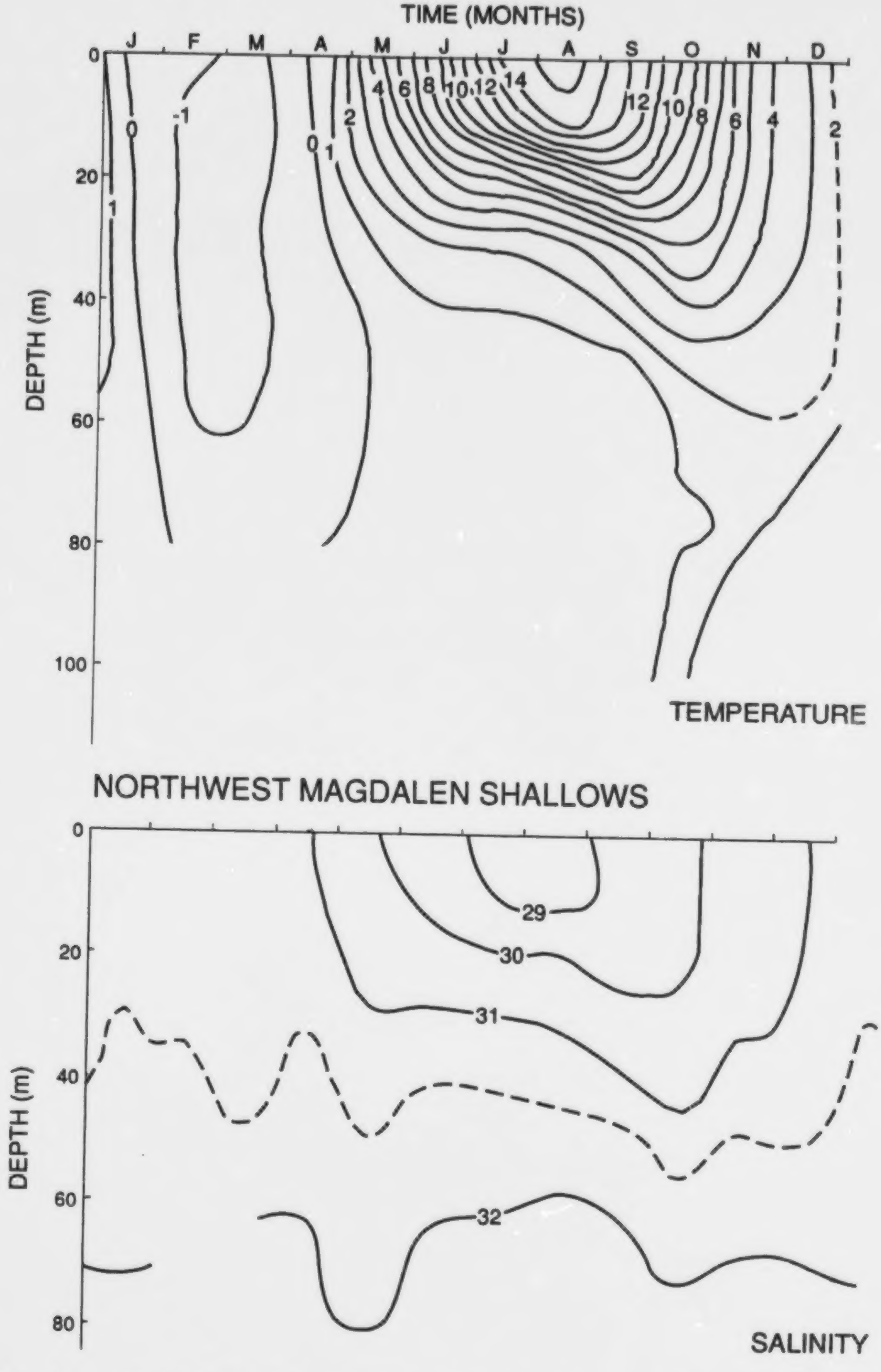


Fig. 4e. The time-depth distribution of the monthly mean temperature and salinity for area 12, Northwest Magdalen Shallows.

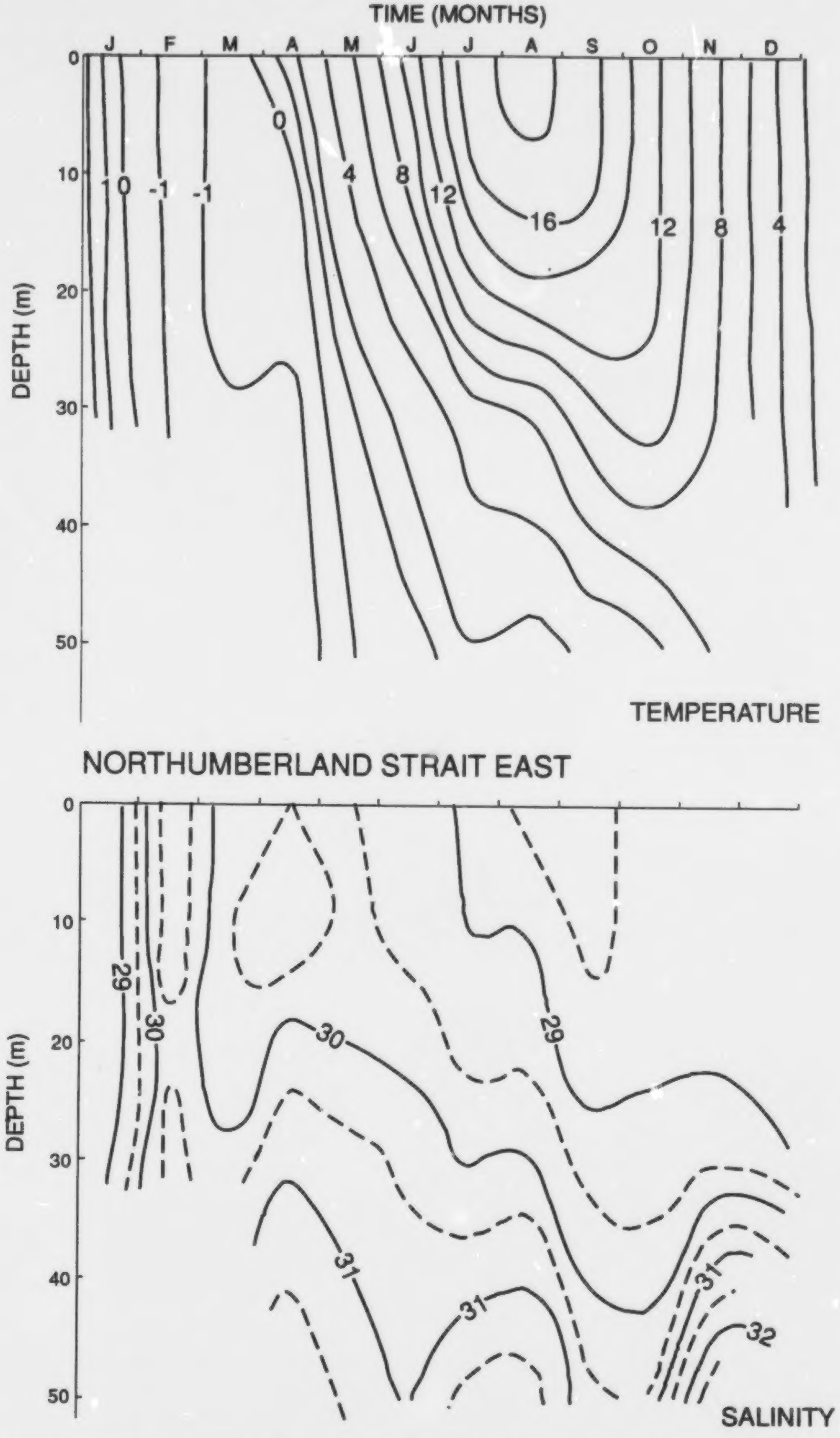


Fig. 4f. The time-depth distribution of the monthly mean temperature and salinity for area 17, Northumberland Strait East.

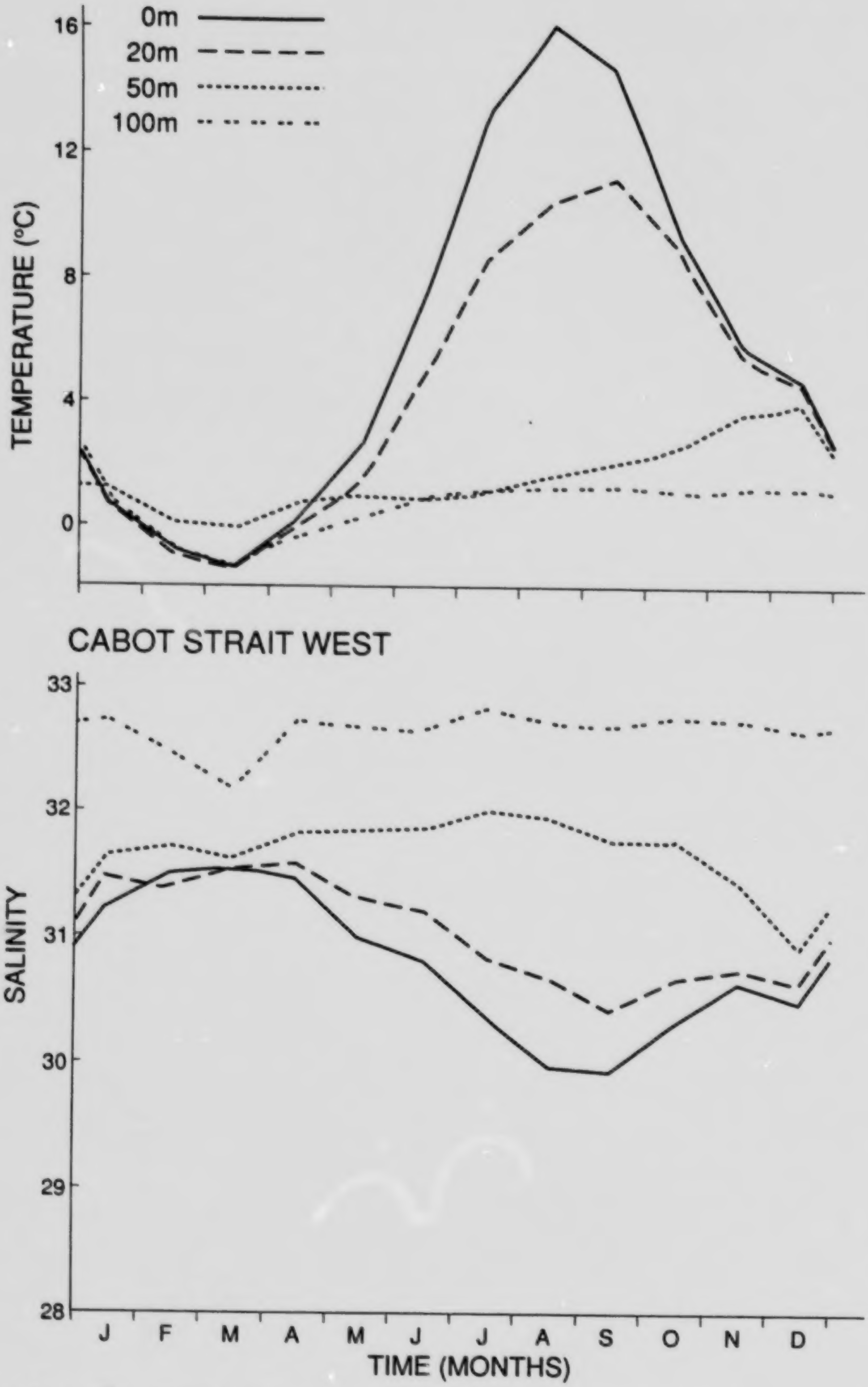


Fig. 5a. The annual variations of the monthly mean temperature and salinity for area 1, Cabot Strait West.

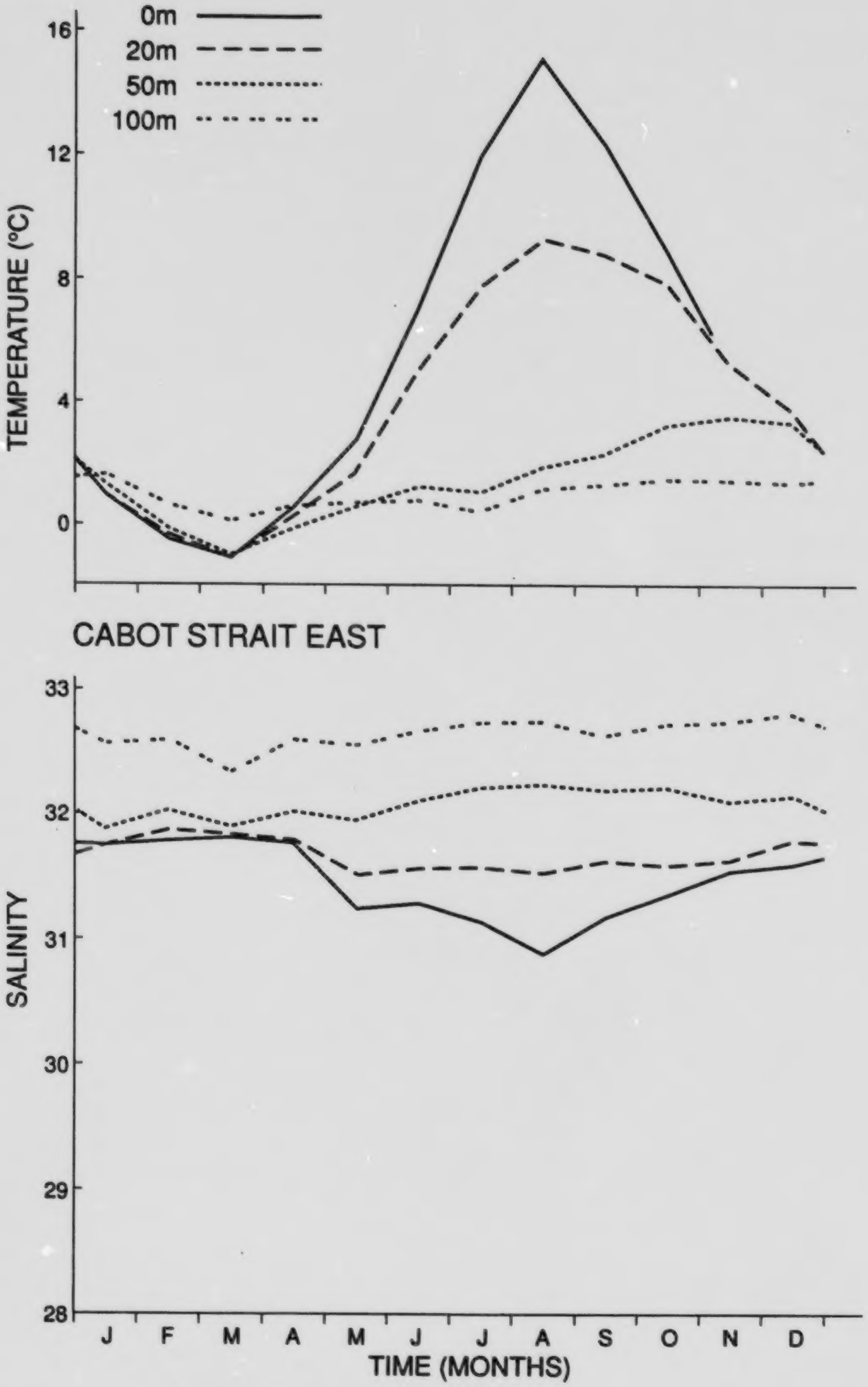


Fig. 5b. The annual variations of the monthly mean temperature and salinity for area 2, Cabot Strait East.

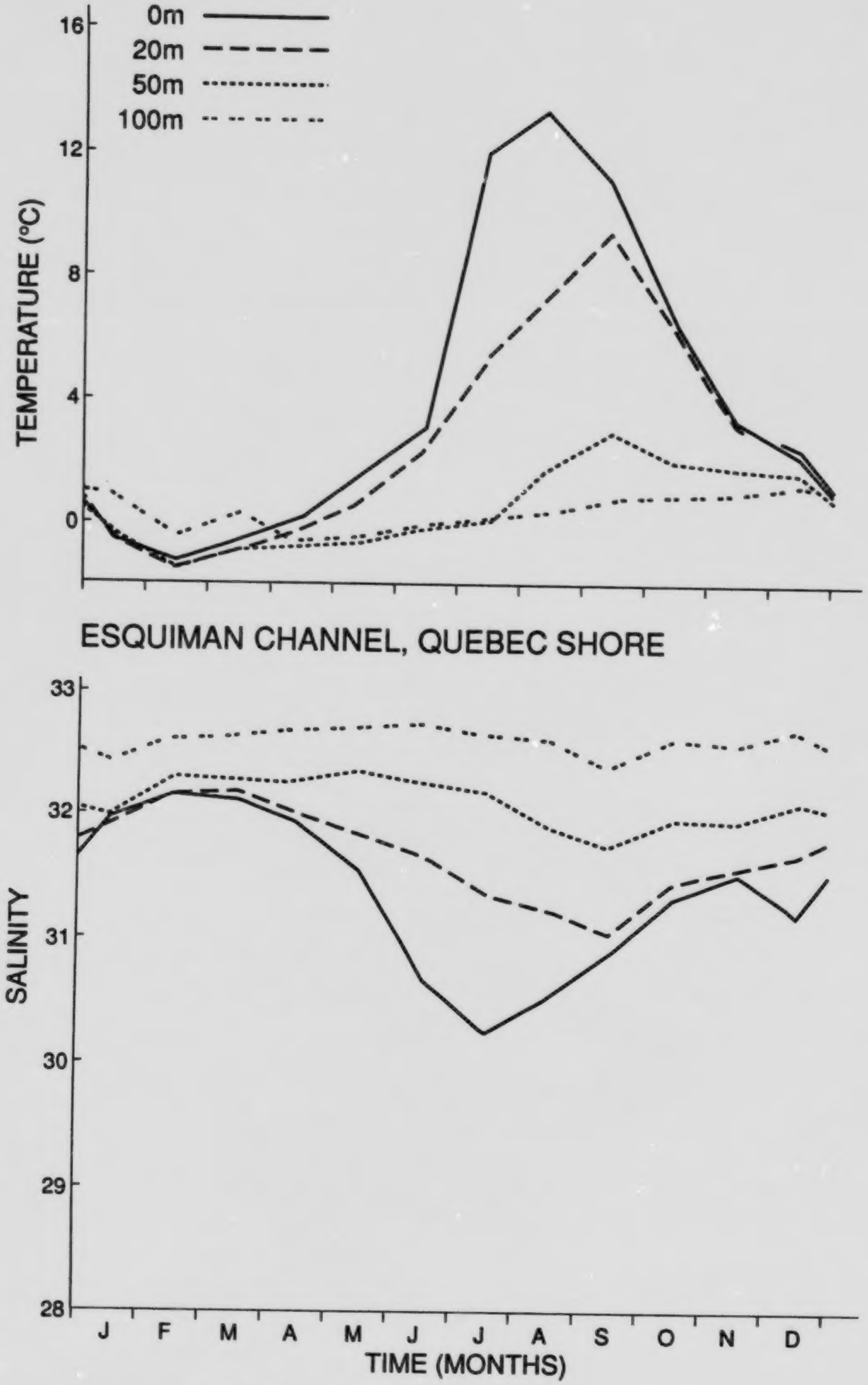


Fig. 5c. The annual variations of the monthly mean temperature and salinity for area 4, Esquiman Channel, Québec Shore.

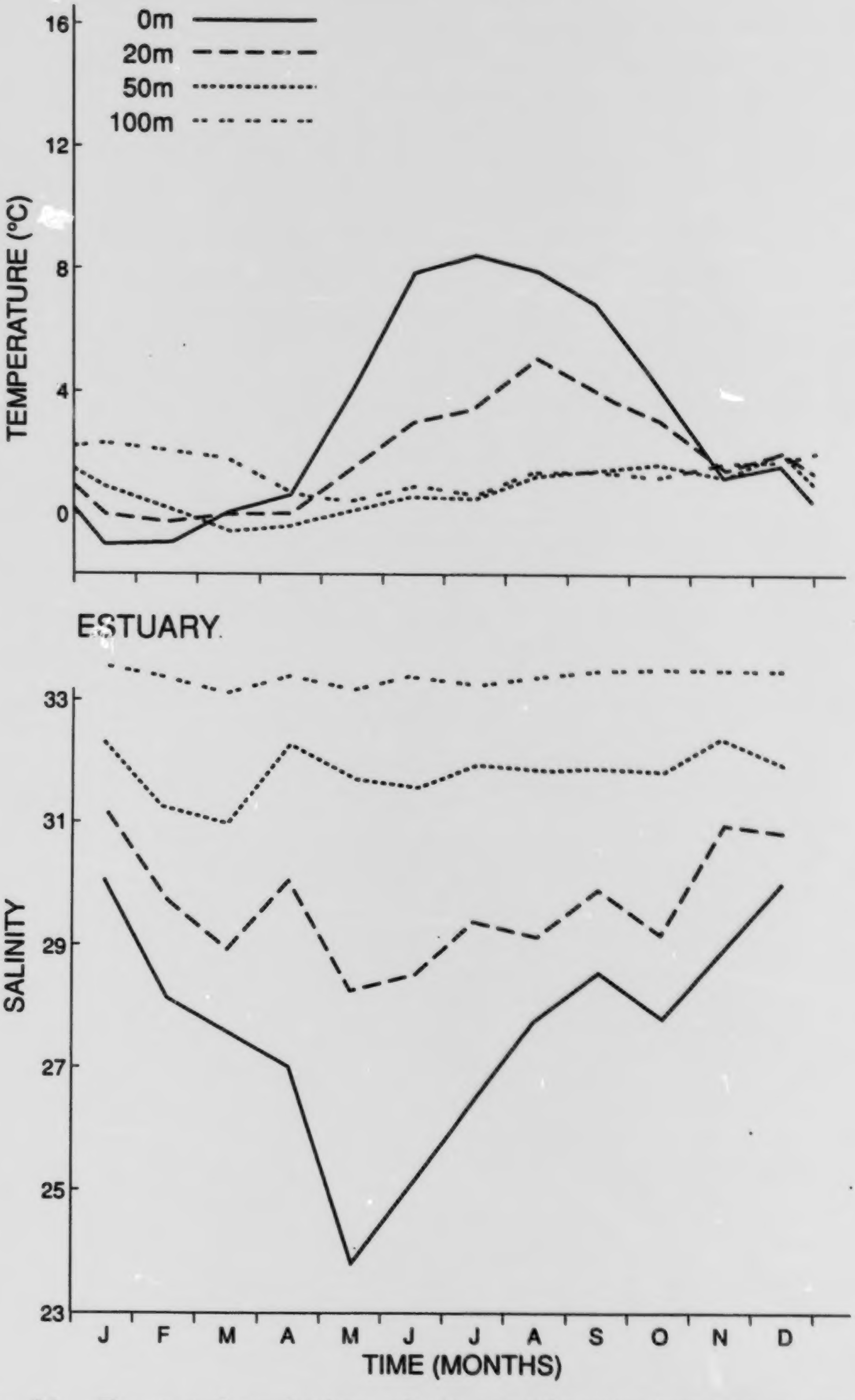


Fig. 5d. The annual variations of the monthly mean temperature and salinity for area 7, Estuary.

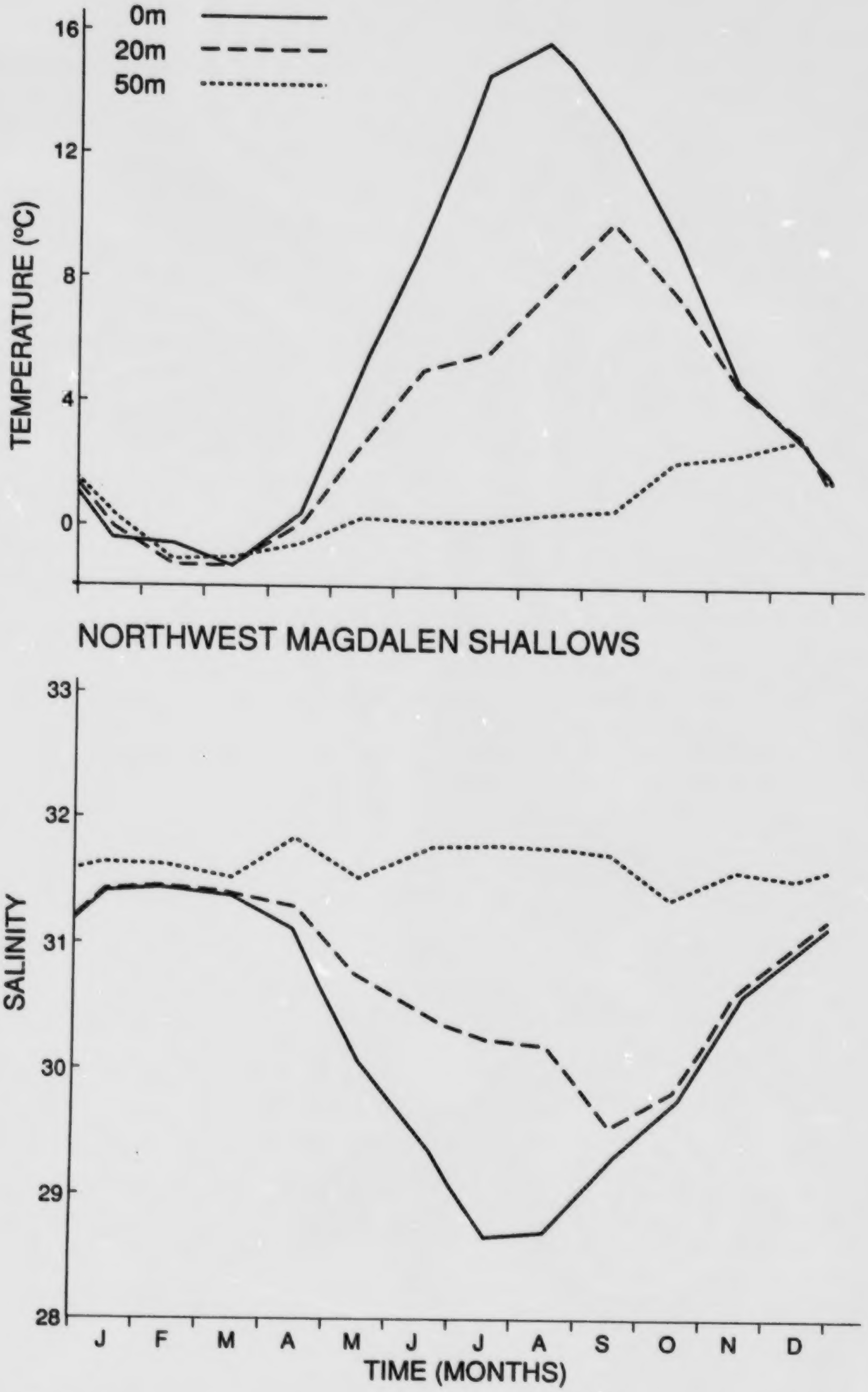


Fig. 5e. The annual variations of the monthly mean temperature and salinity for area 12, Northwest Magdalen Shallows.

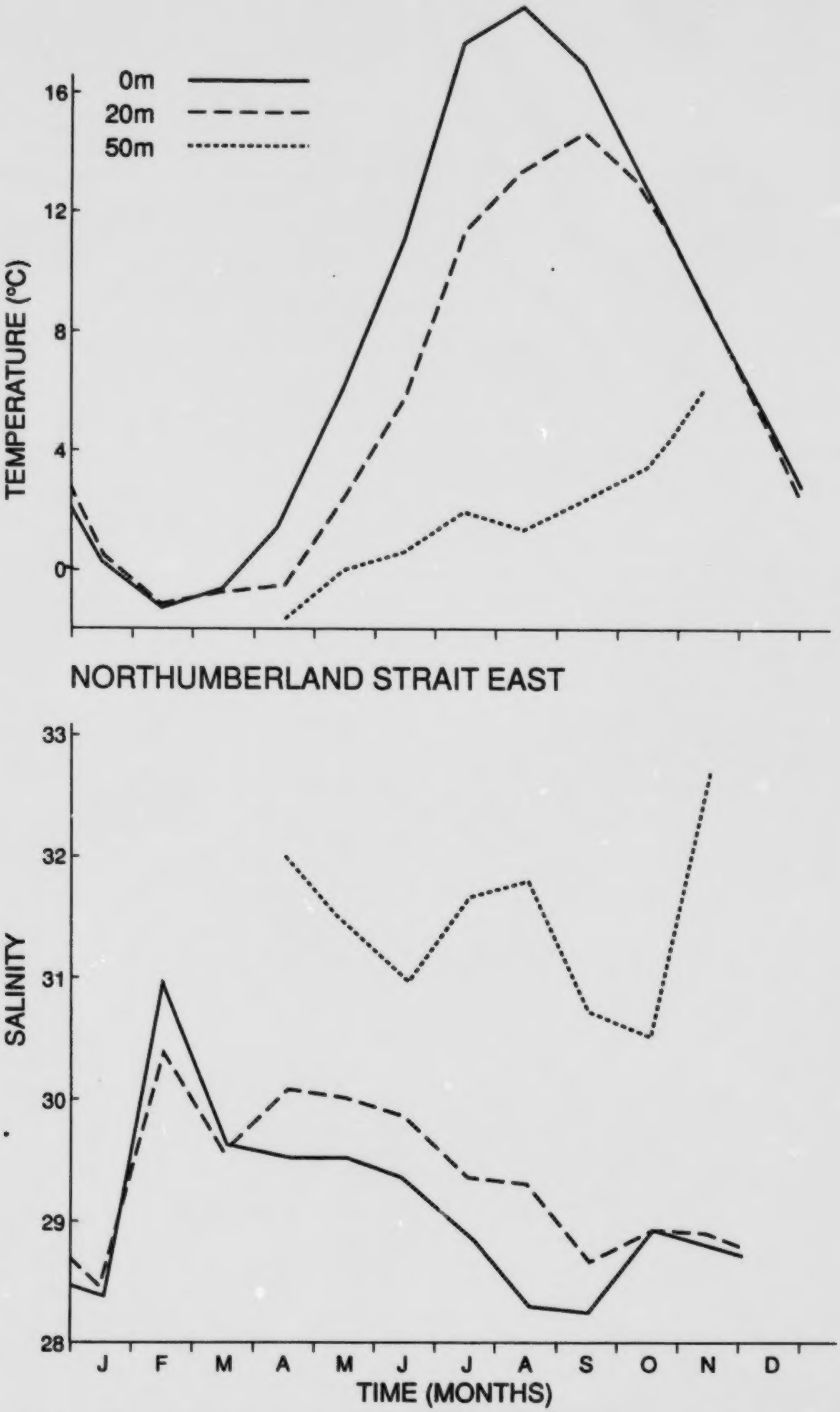
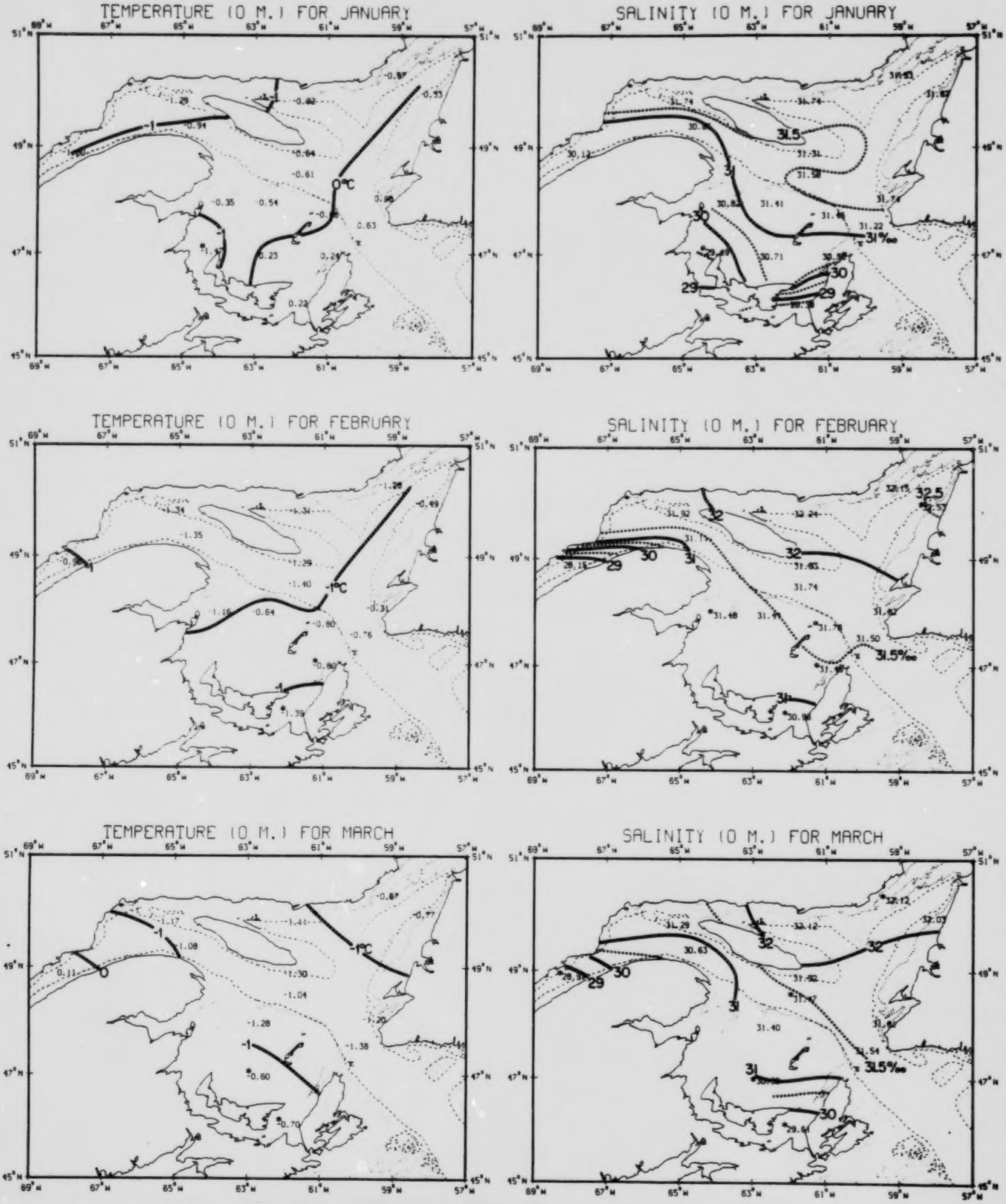


Fig. 5f. The annual variations of the monthly mean temperature and salinity for area 17, Northumberland Strait East.



TEMPERATURE (0 M.) FOR JANUARY

SALINITY (0 M.) FOR JANUARY

TEMPERATURE (0 M.) FOR FEBRUARY

SALINITY (0 M.) FOR FEBRUARY

TEMPERATURE (0 M.) FOR MARCH

SALINITY (0 M.) FOR MARCH

51°N
49°N
47°N
45°N
69°W
67°W
65°W
63°W
61°W
59°W
57°W
-1
0°C
31
31.5
31%o
30
29
-1°C
32
32.5
31.5%o
0
30

Fig. 6a. Monthly mean 0m temperature and salinity, January to March.

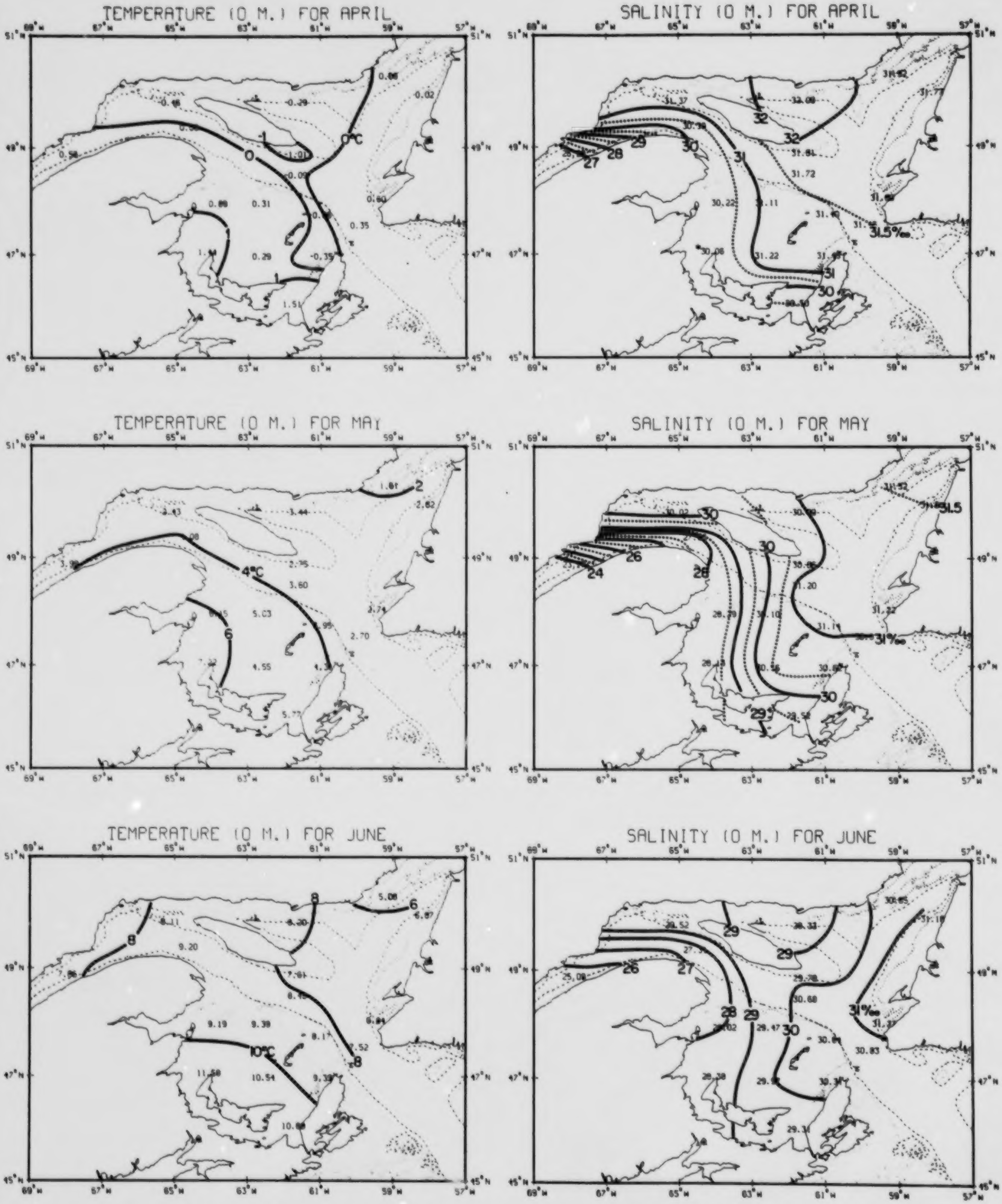
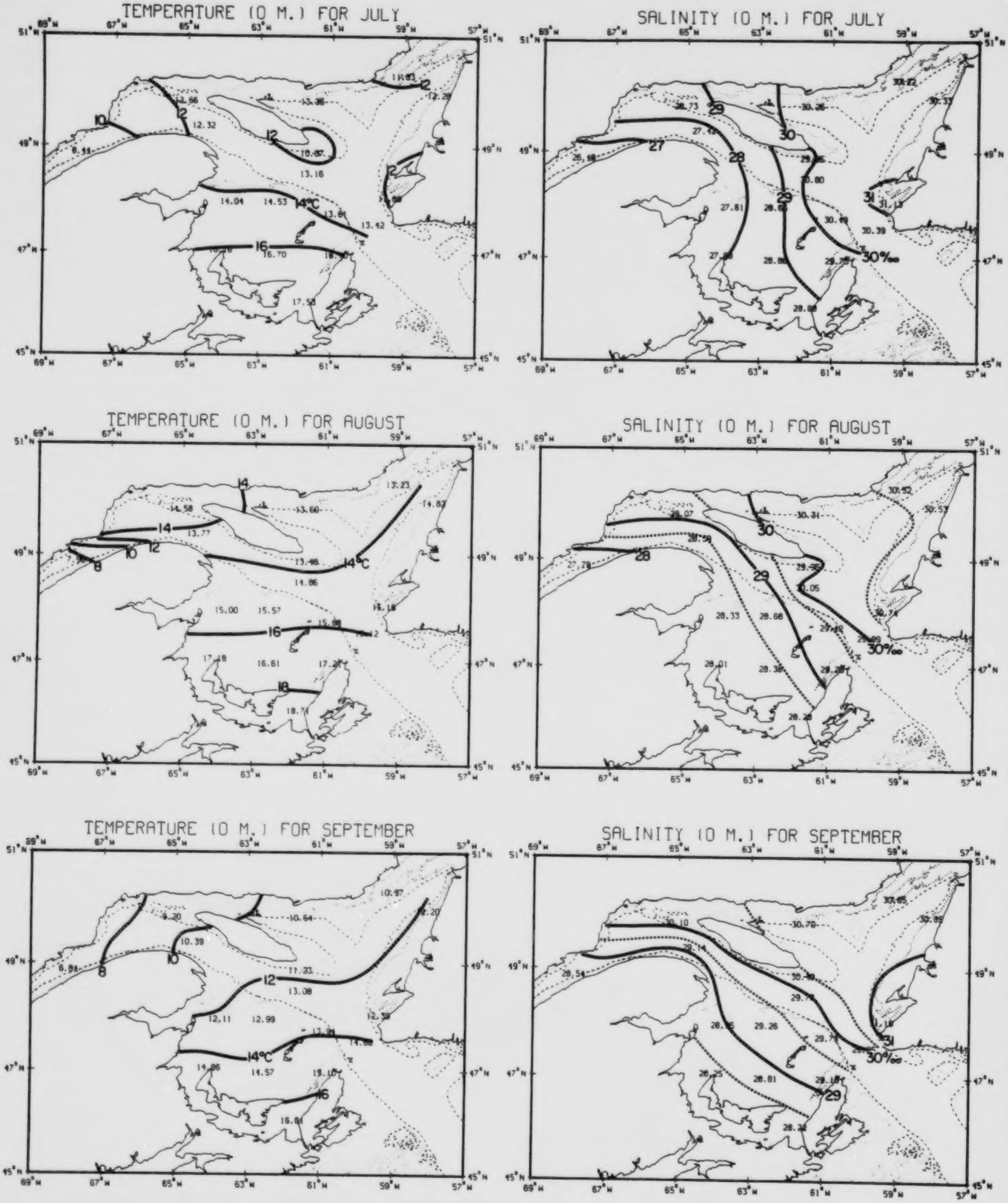

TEMPERATURE (0 M.) FOR APRIL
SALINITY (0 M.) FOR APRIL
TEMPERATURE (0 M.) FOR MAY
SALINITY (0 M.) FOR MAY
TEMPERATURE (0 M.) FOR JUNE
SALINITY (0 M.) FOR JUNE
0°C
31.5‰
4°C
31‰
10°C
31‰
69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N

Fig. 6b. Monthly mean 0m temperature and salinity, April to June.



TEMPERATURE (0 M.) FOR JULY

SALINITY (0 M.) FOR JULY

TEMPERATURE (0 M.) FOR AUGUST

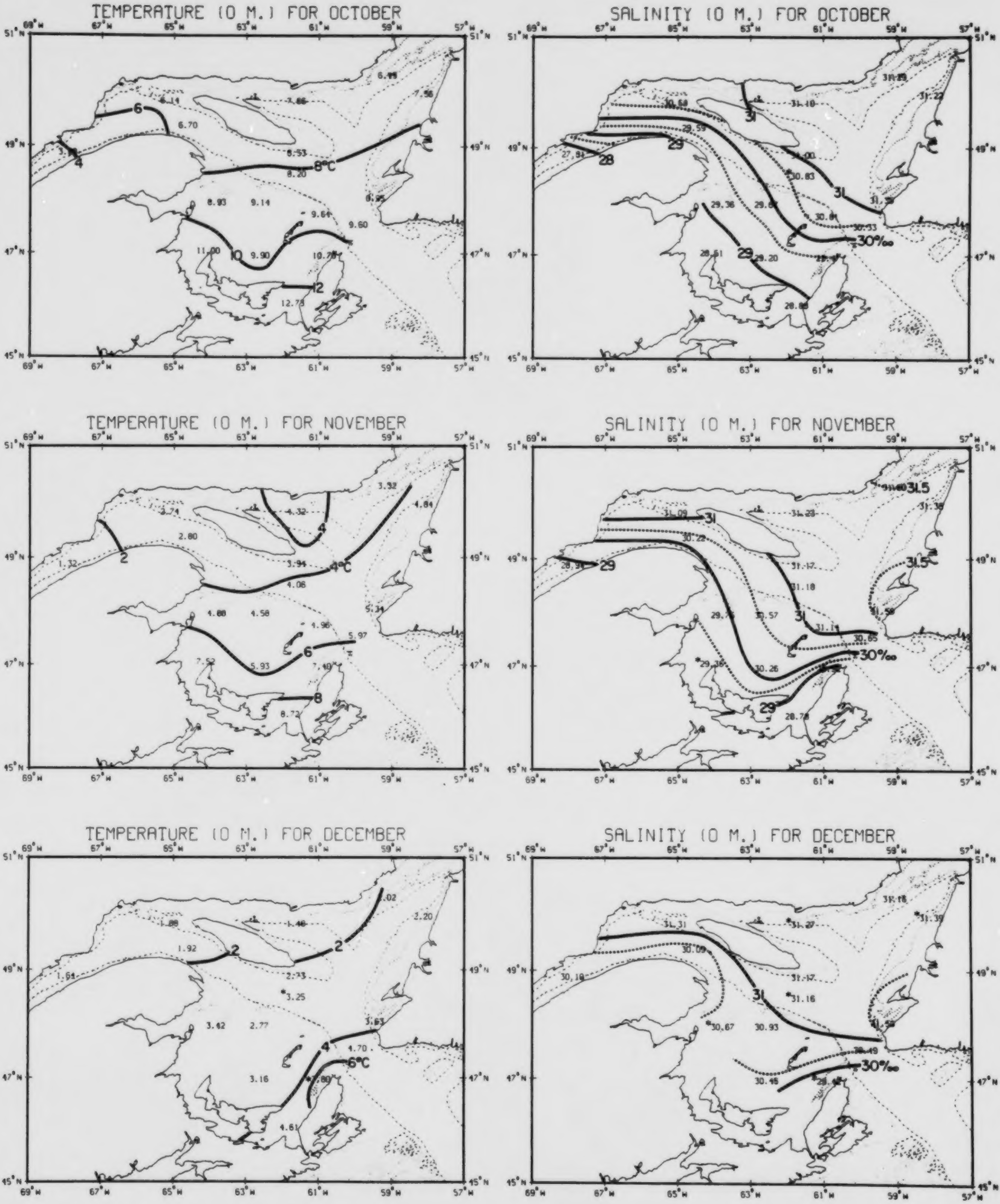
SALINITY (0 M.) FOR AUGUST

TEMPERATURE (0 M.) FOR SEPTEMBER

SALINITY (0 M.) FOR SEPTEMBER

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
10
12
14°C
16
18
8
30‰
27
28
29
30
31

Fig. 6c. Monthly mean 0m temperature and salinity, July to September.


TEMPERATURE (0 M.) FOR OCTOBER

SALINITY (0 M.) FOR OCTOBER

TEMPERATURE (0 M.) FOR NOVEMBER

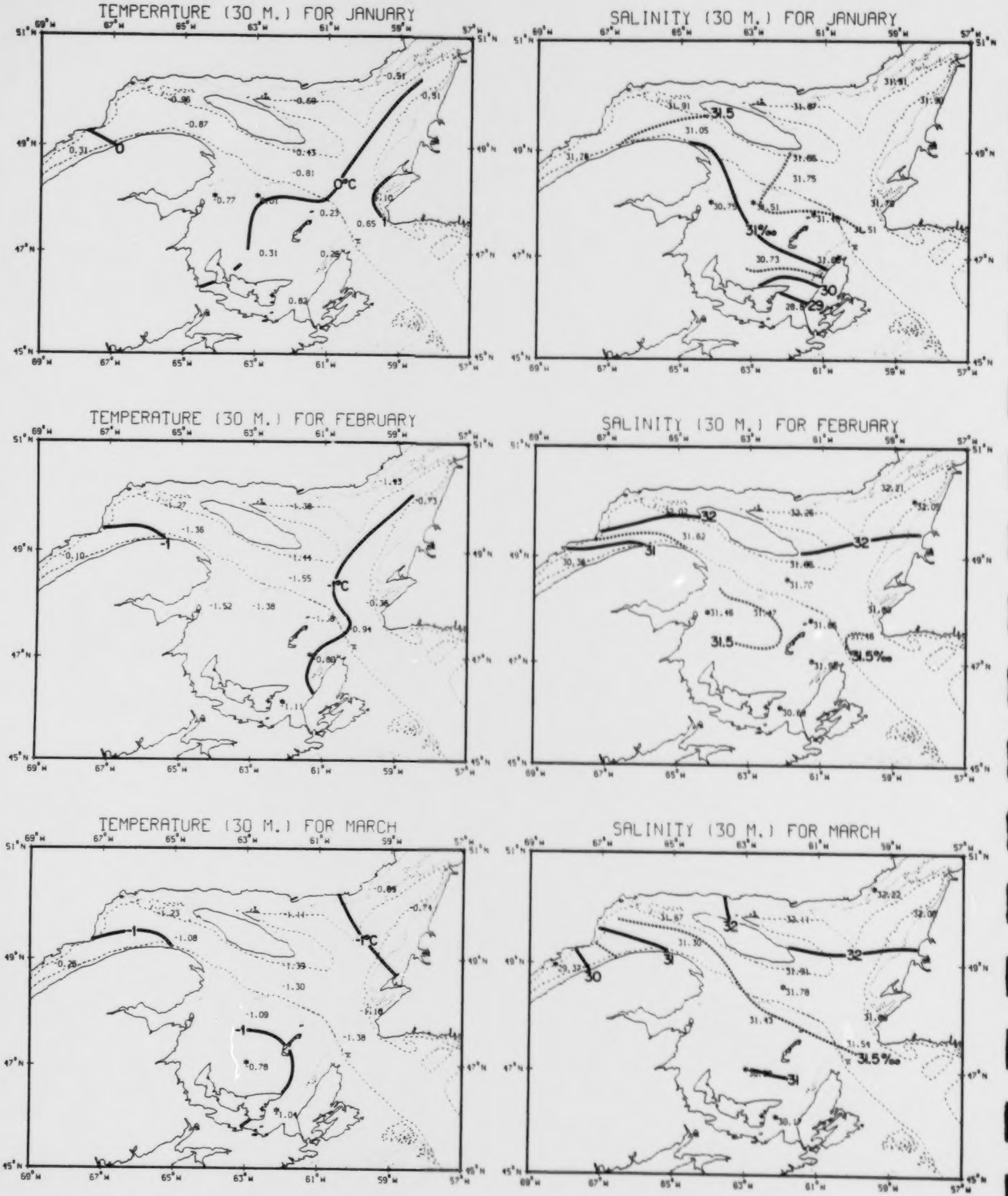
SALINITY (0 M.) FOR NOVEMBER

TEMPERATURE (0 M.) FOR DECEMBER

SALINITY (0 M.) FOR DECEMBER

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
6
4
8°C
10
12
6.14
6.70
7.66
7.56
6.99
8.53
8.20
8.93
9.14
9.64
9.60
11.00
9.90
10.78
12.73
28
29
31
30‰
27.94
30.68
29.59
31.10
31.22
31.00
30.83
29.36
29.64
30.81
30.53
28.61
29.20
28.88
2
4°C
6
8
1.32
3.74
2.80
4.32
3.32
4.84
3.94
4.08
4.88
4.58
4.96
5.97
5.34
7.52
5.93
7.19
8.72
29
31
31.5
30‰
28.34
31.09
30.22
31.28
31.36
31.17
31.18
29.75
30.57
31.11
30.65
29.38
30.26
28.78
2
4
6°C
1.61
1.88
1.92
1.48
2.02
2.20
2.73
3.25
3.42
2.77
3.63
4.70
3.16
4.80
4.61
31
30‰
30.18
31.31
30.09
31.27
31.18
31.39
31.17
31.16
30.67
30.93
31.58
30.49
30.45
29.48

Fig. 6d. Monthly mean 0m temperature and salinity, October to December.


TEMPERATURE (30 M.) FOR JANUARY

SALINITY (30 M.) FOR JANUARY

TEMPERATURE (30 M.) FOR FEBRUARY

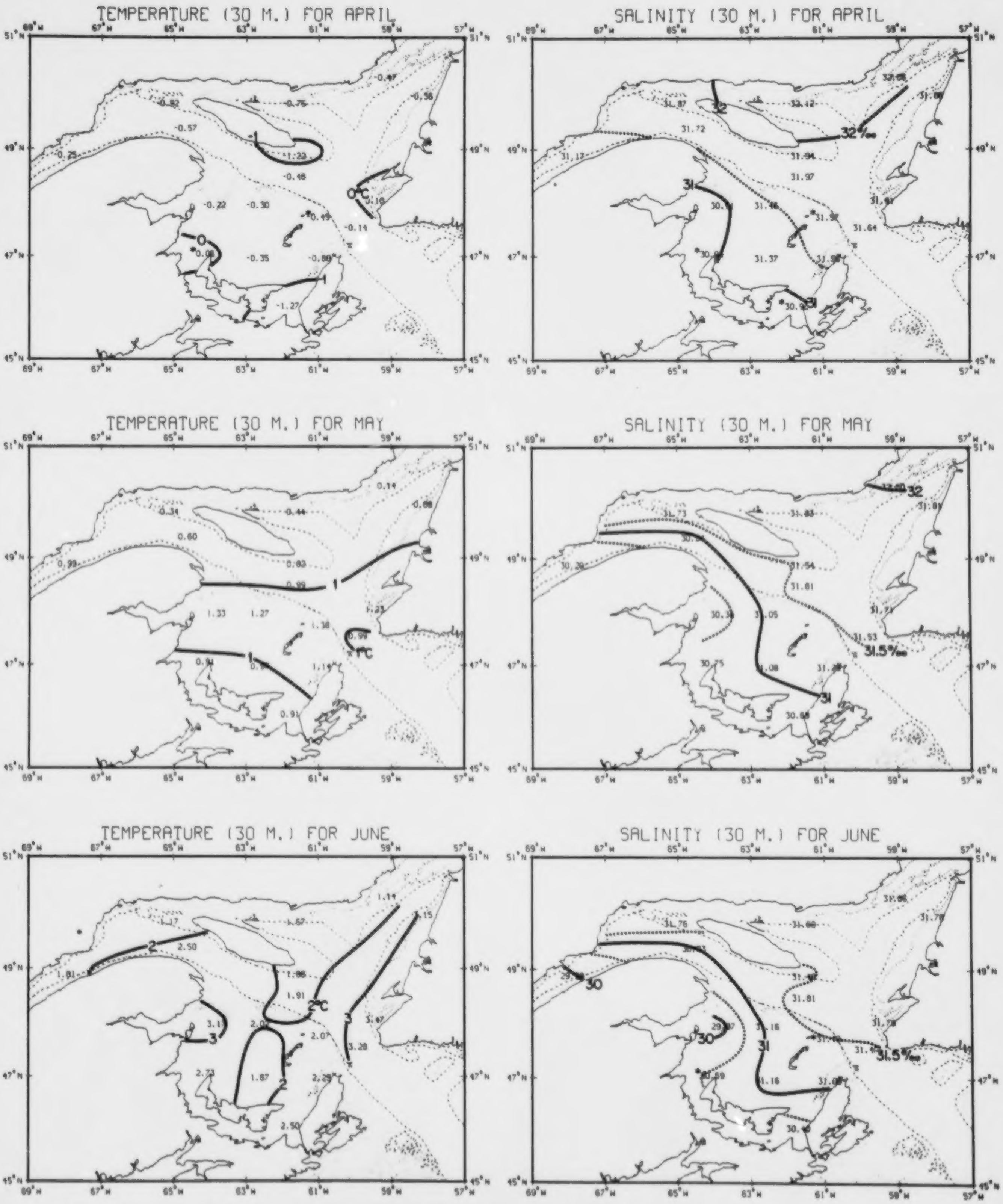
SALINITY (30 M.) FOR FEBRUARY

TEMPERATURE (30 M.) FOR MARCH

SALINITY (30 M.) FOR MARCH

51°N
49°N
47°N
45°N
69°W
67°W
65°W
63°W
61°W
59°W
57°W
0°C
0
1
-1°C
-1
31‰
31.5
30
29
31
32
31.5‰
30

Fig. 7a. Monthly mean 30m temperature and salinity, January to March.



TEMPERATURE (30 M.) FOR APRIL

SALINITY (30 M.) FOR APRIL

TEMPERATURE (30 M.) FOR MAY

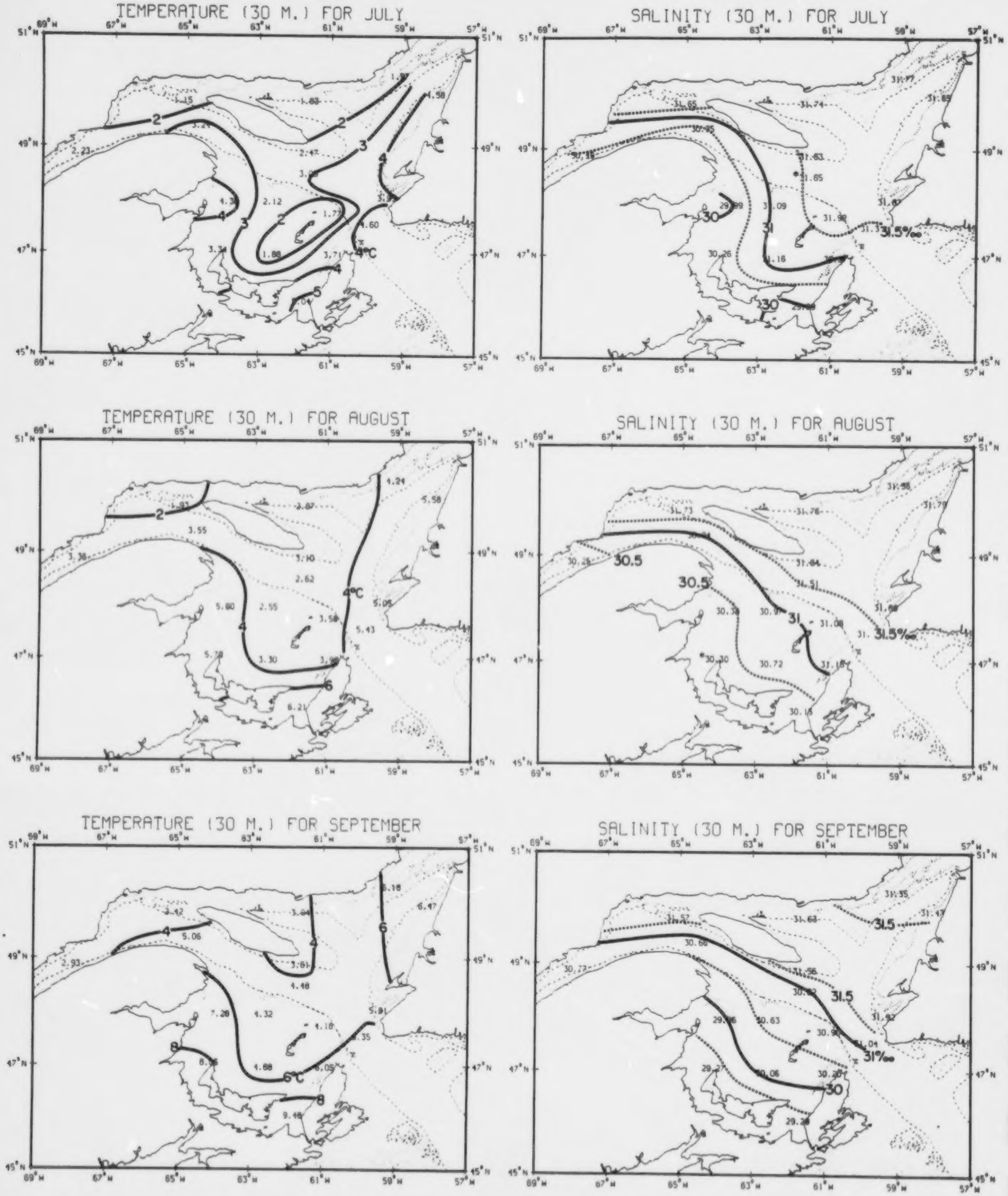
SALINITY (30 M.) FOR MAY

TEMPERATURE (30 M.) FOR JUNE

SALINITY (30 M.) FOR JUNE

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
0°C
1°C
2°C
32‰
31.5‰
-0.92
-0.57
-0.75
-1.22
-0.48
-0.22
-0.30
-0.35
-1.27
-0.14
0.10
31.72
31.37
31.97
31.64
31.81
1.33
1.27
0.99
0.91
1.14
30.75
31.05
2.50
1.91
1.87
2.07
2.50
3.28
30
31
32

Fig. 7b. Monthly mean 30m temperature and salinity, April to June.



TEMPERATURE (30 M.) FOR JULY

SALINITY (30 M.) FOR JULY

TEMPERATURE (30 M.) FOR AUGUST

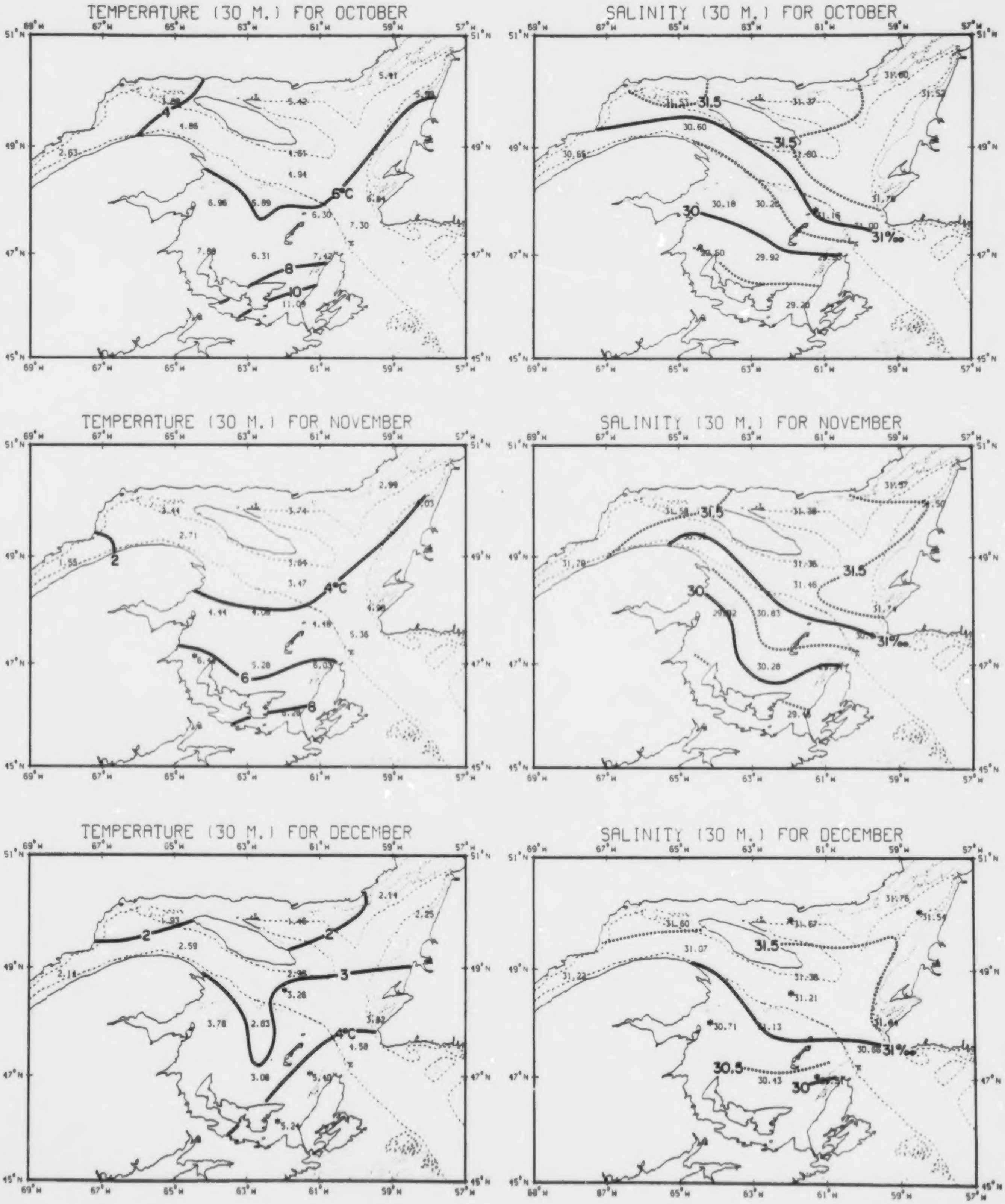
SALINITY (30 M.) FOR AUGUST

TEMPERATURE (30 M.) FOR SEPTEMBER

SALINITY (30 M.) FOR SEPTEMBER

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
4°C
31.5‰
30.5
6°C
31‰

Fig. 7c. Monthly mean 30m temperature and salinity, July to September.



TEMPERATURE (30 M.) FOR OCTOBER

SALINITY (30 M.) FOR OCTOBER

TEMPERATURE (30 M.) FOR NOVEMBER

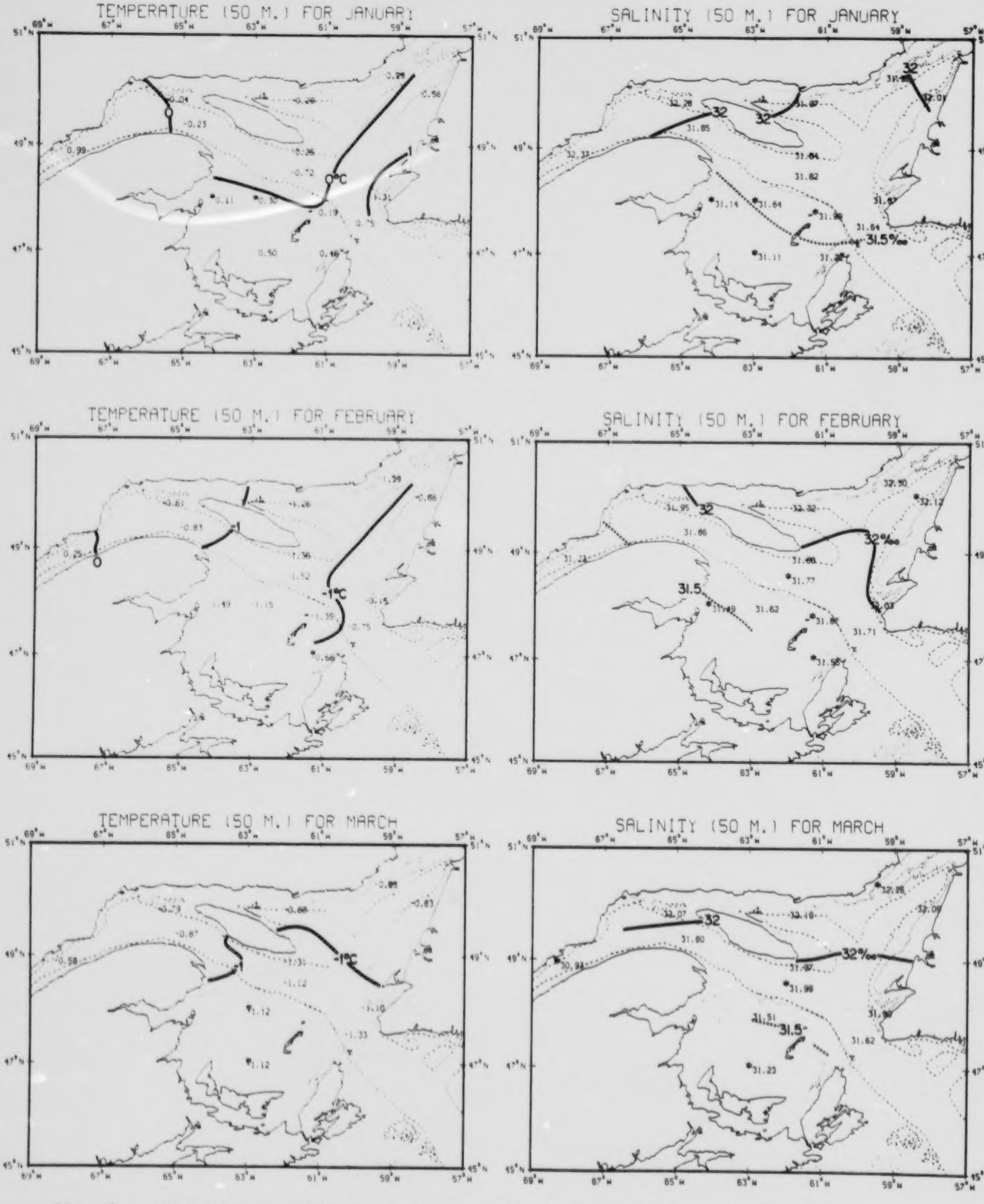
SALINITY (30 M.) FOR NOVEMBER

TEMPERATURE (30 M.) FOR DECEMBER

SALINITY (30 M.) FOR DECEMBER

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
4
6°C
8
10
31.5
30
31‰
2
4°C
6
3
30.5

Fig. 7d. Monthly mean 30m temperature and salinity, October to December.



TEMPERATURE (50 M.) FOR JANUARY

SALINITY (50 M.) FOR JANUARY

TEMPERATURE (50 M.) FOR FEBRUARY

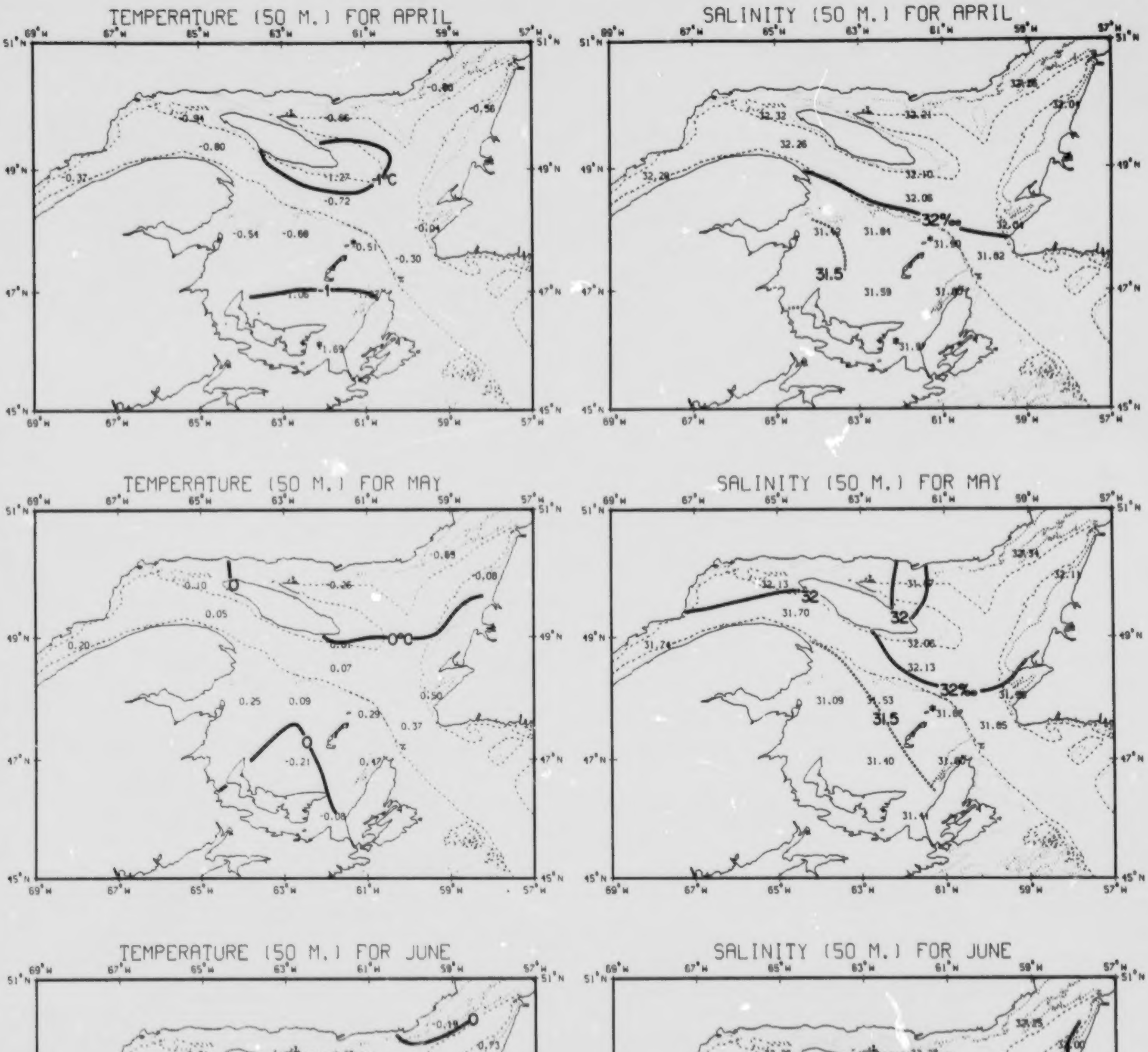
SALINITY (50 M.) FOR FEBRUARY

TEMPERATURE (50 M.) FOR MARCH

SALINITY (50 M.) FOR MARCH

0°C
1
0
32
31.5‰
-1°C
0
-1
32‰
31.5
-1°C
-1
32
32‰
31.5
69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N

Fig. 8a. Monthly mean 50m temperature and salinity, January to March.



TEMPERATURE (50 M.) FOR APRIL

SALINITY (50 M.) FOR APRIL

TEMPERATURE (50 M.) FOR MAY

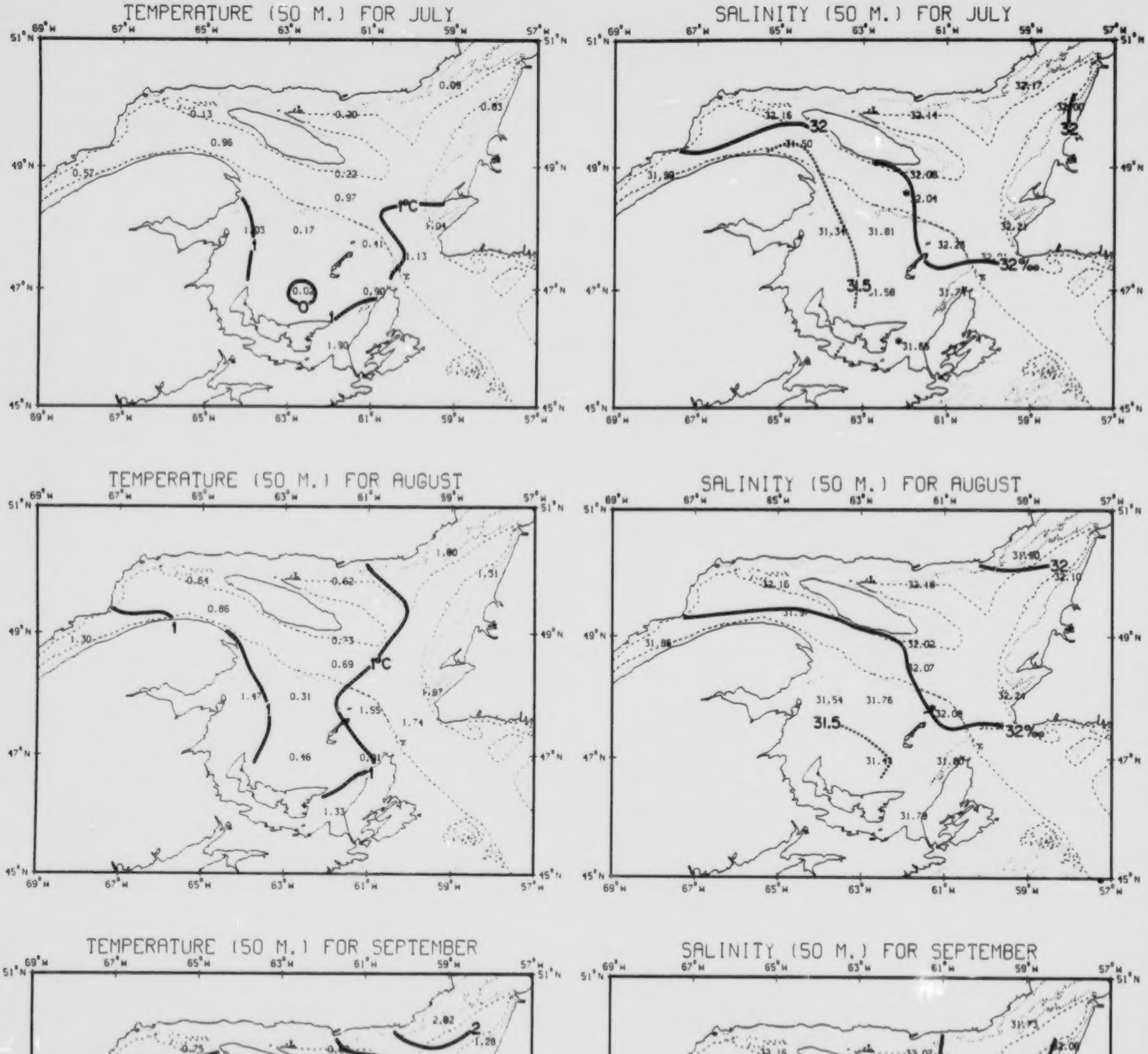
SALINITY (50 M.) FOR MAY

TEMPERATURE (50 M.) FOR JUNE

SALINITY (50 M.) FOR JUNE

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
-1°C
-1
0°C
0
32‰
32
31.5
31

Fig. 8b. Monthly mean 50m temperature and salinity, April to June.



TEMPERATURE (50 M.) FOR JULY

SALINITY (50 M.) FOR JULY

TEMPERATURE (50 M.) FOR AUGUST

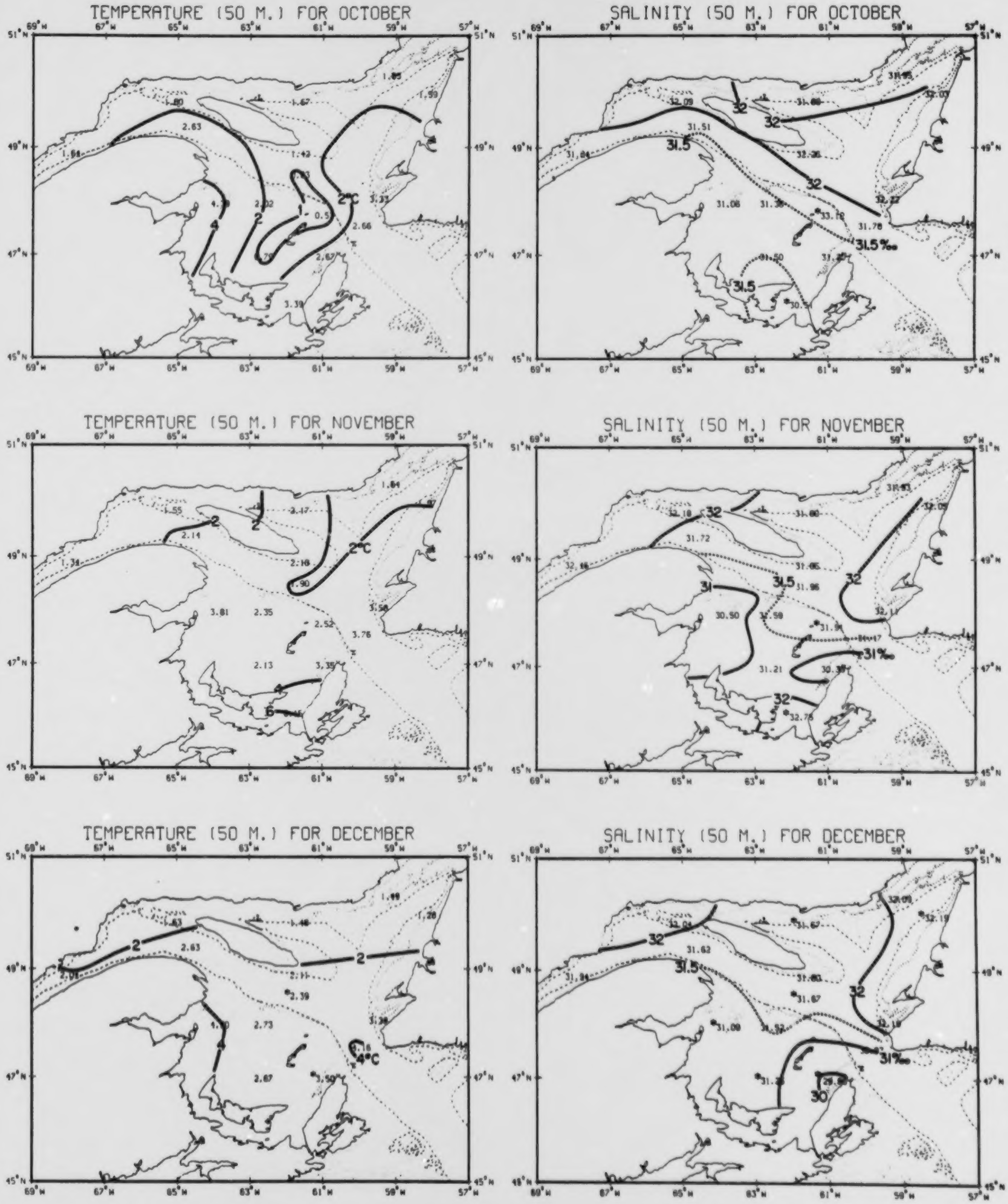
SALINITY (50 M.) FOR AUGUST

TEMPERATURE (50 M.) FOR SEPTEMBER

SALINITY (50 M.) FOR SEPTEMBER

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
1°C
0
1
2
31.5
32
32‰
31

Fig. 8c. Monthly mean 50m temperature and salinity, July to September.



TEMPERATURE (50 M.) FOR OCTOBER

SALINITY (50 M.) FOR OCTOBER

TEMPERATURE (50 M.) FOR NOVEMBER

SALINITY (50 M.) FOR NOVEMBER

TEMPERATURE (50 M.) FOR DECEMBER

SALINITY (50 M.) FOR DECEMBER

69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
2°C
4
2
1
0.5
31.5
32
31.5‰
31‰
2
6
4°C
30

Fig. 8d. Monthly mean 50m temperature and salinity, October to December.

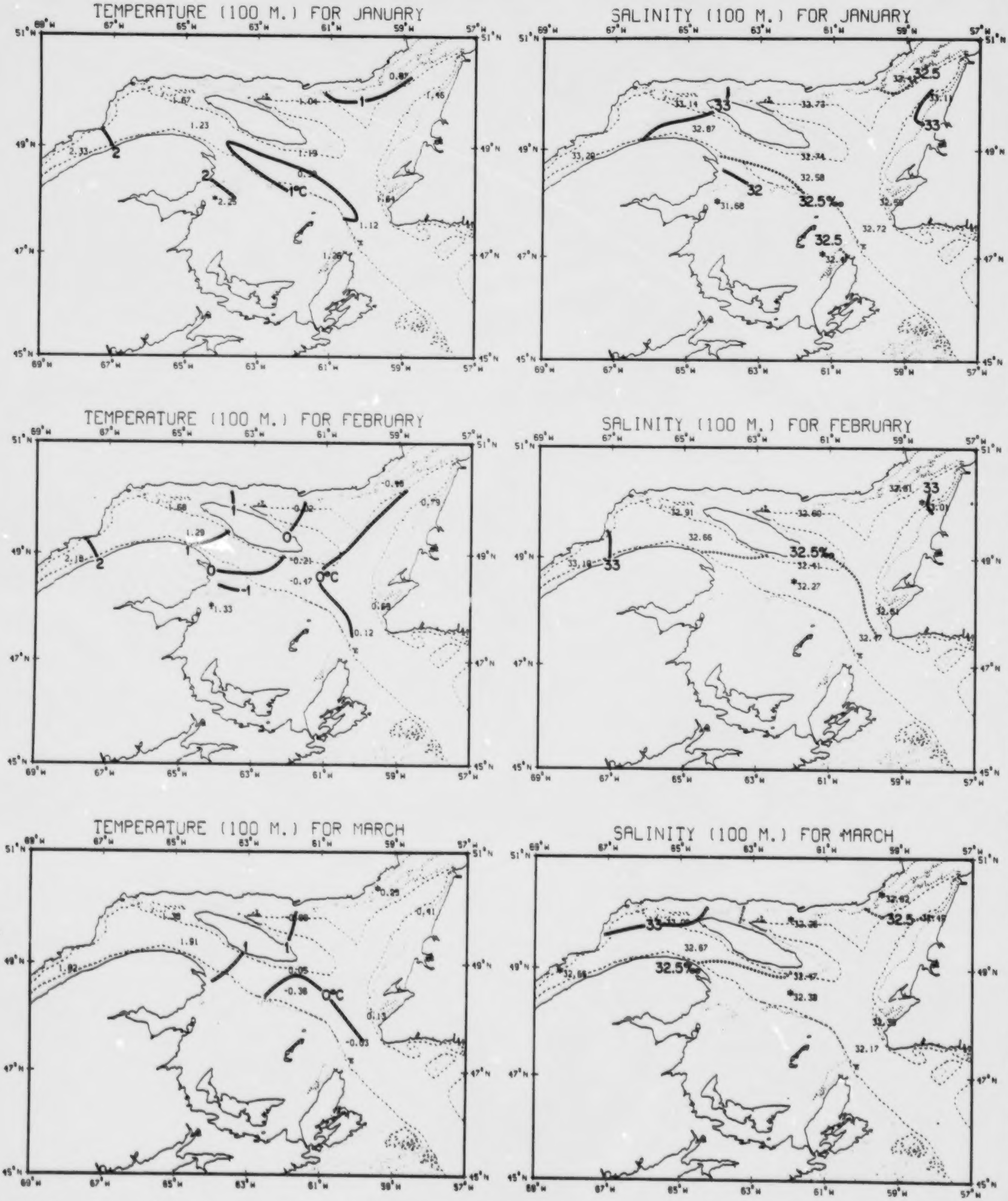

TEMPERATURE (100 M.) FOR JANUARY
SALINITY (100 M.) FOR JANUARY
TEMPERATURE (100 M.) FOR FEBRUARY
SALINITY (100 M.) FOR FEBRUARY
TEMPERATURE (100 M.) FOR MARCH
SALINITY (100 M.) FOR MARCH
69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
1°C
0°C
32.5‰
32.5
33
32
2
1
0
-1

Fig. 9a. Monthly mean 100m temperature and salinity, January to March.

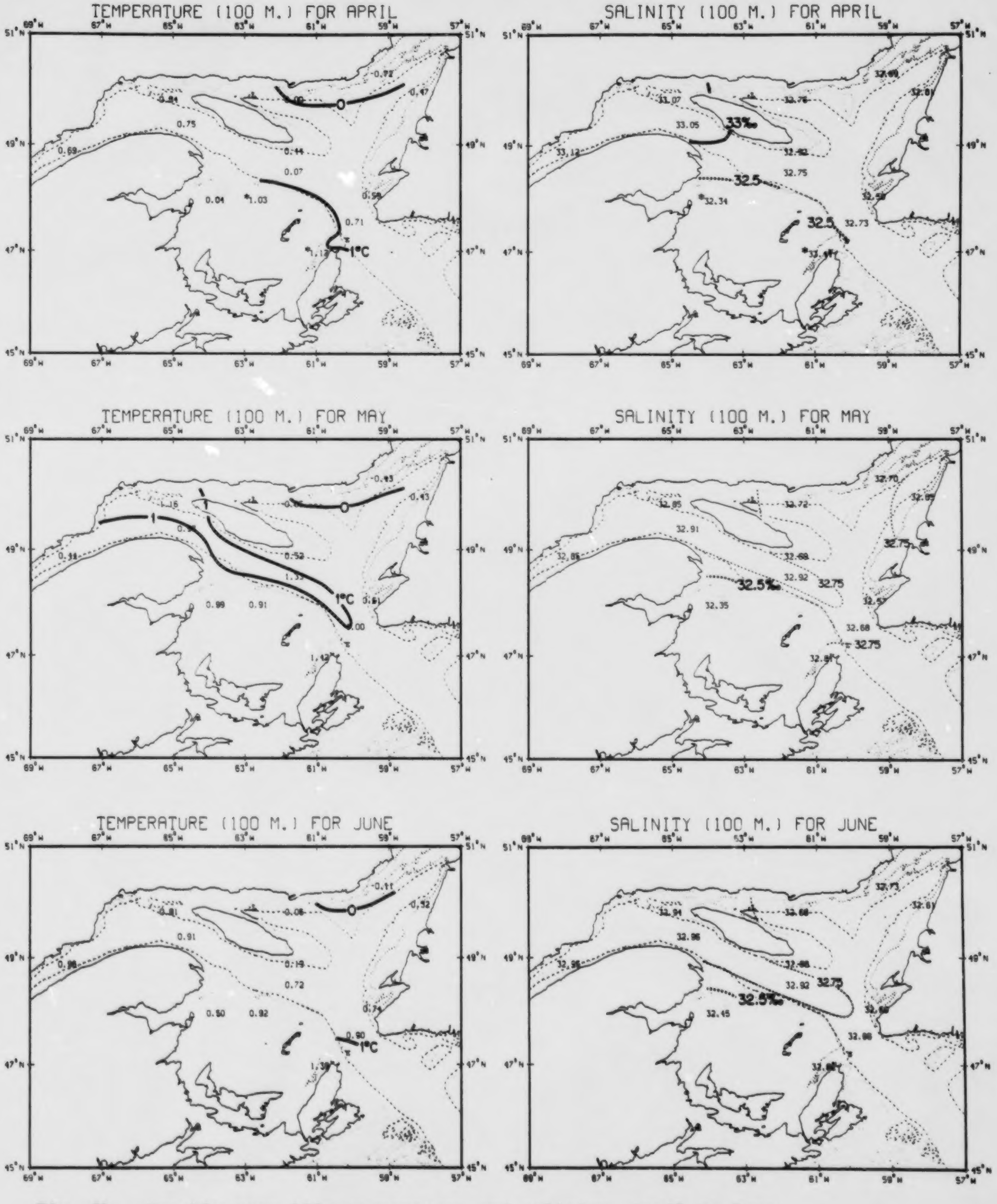

TEMPERATURE (100 M.) FOR APRIL
SALINITY (100 M.) FOR APRIL
TEMPERATURE (100 M.) FOR MAY
SALINITY (100 M.) FOR MAY
TEMPERATURE (100 M.) FOR JUNE
SALINITY (100 M.) FOR JUNE
0
1°C
33‰
32.5
32.5‰
32.75
51°N
49°N
47°N
45°N
69°W
67°W
65°W
63°W
61°W
59°W
57°W

Fig. 9b. Monthly mean 100m temperature and salinity, April to June.

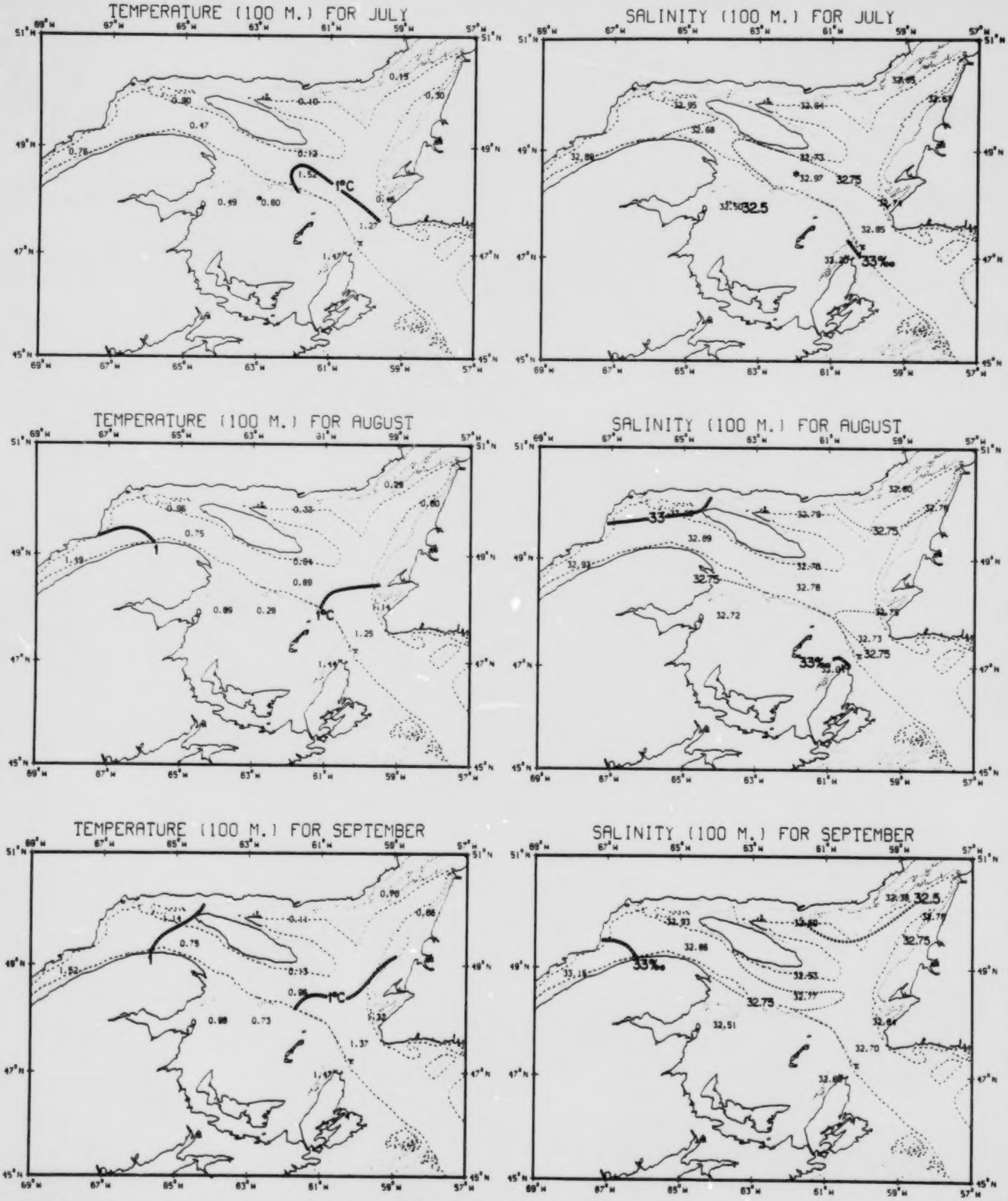

TEMPERATURE (100 M.) FOR JULY
SALINITY (100 M.) FOR JULY
TEMPERATURE (100 M.) FOR AUGUST
SALINITY (100 M.) FOR AUGUST
TEMPERATURE (100 M.) FOR SEPTEMBER
SALINITY (100 M.) FOR SEPTEMBER
69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
1°C
1°C
1°C
1
32.5
32.75
33‰
33
32.75
33‰
32.5
32.75
33‰
32.75

Fig. 9c. Monthly mean 100m temperature and salinity, July to September.

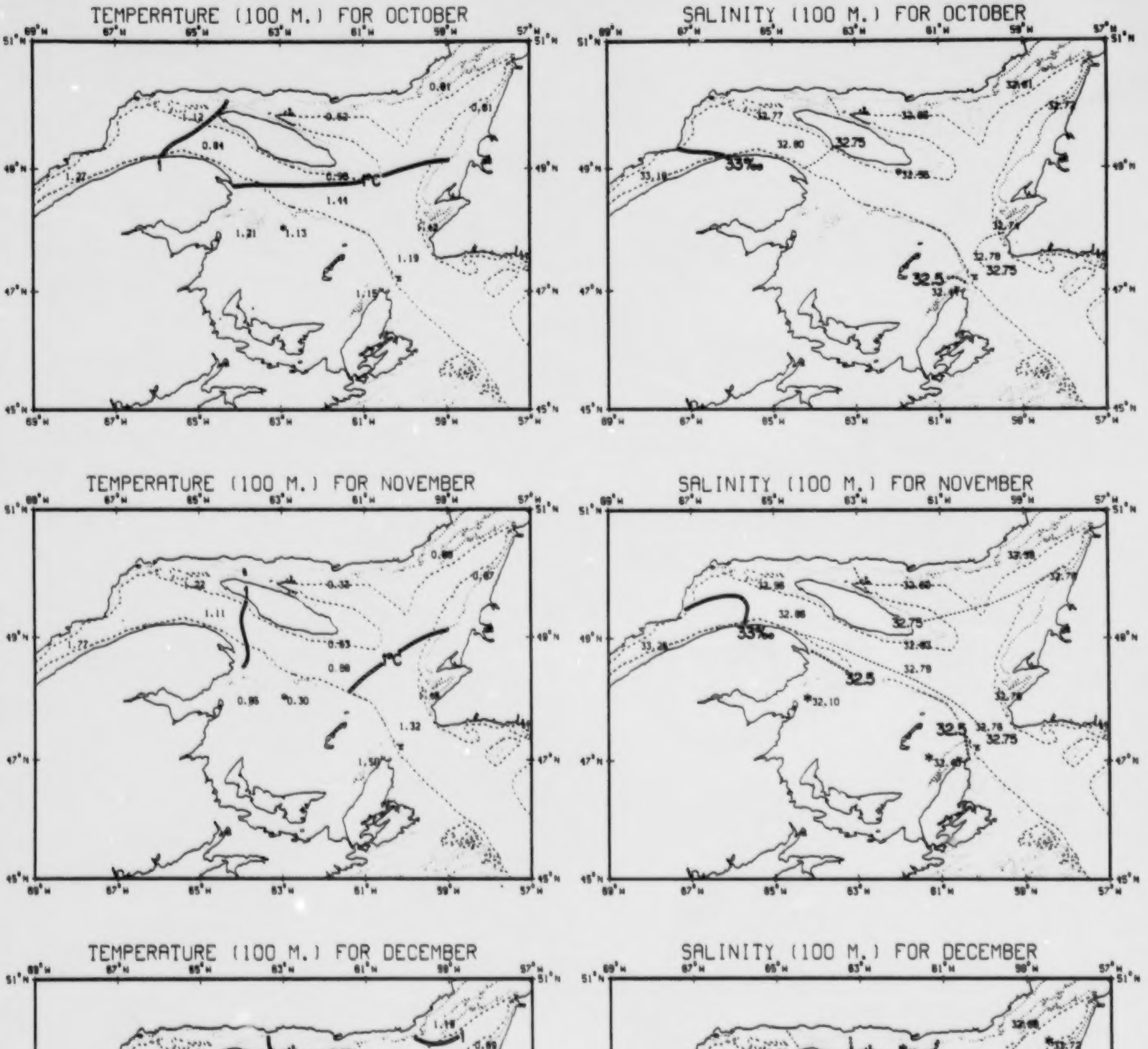
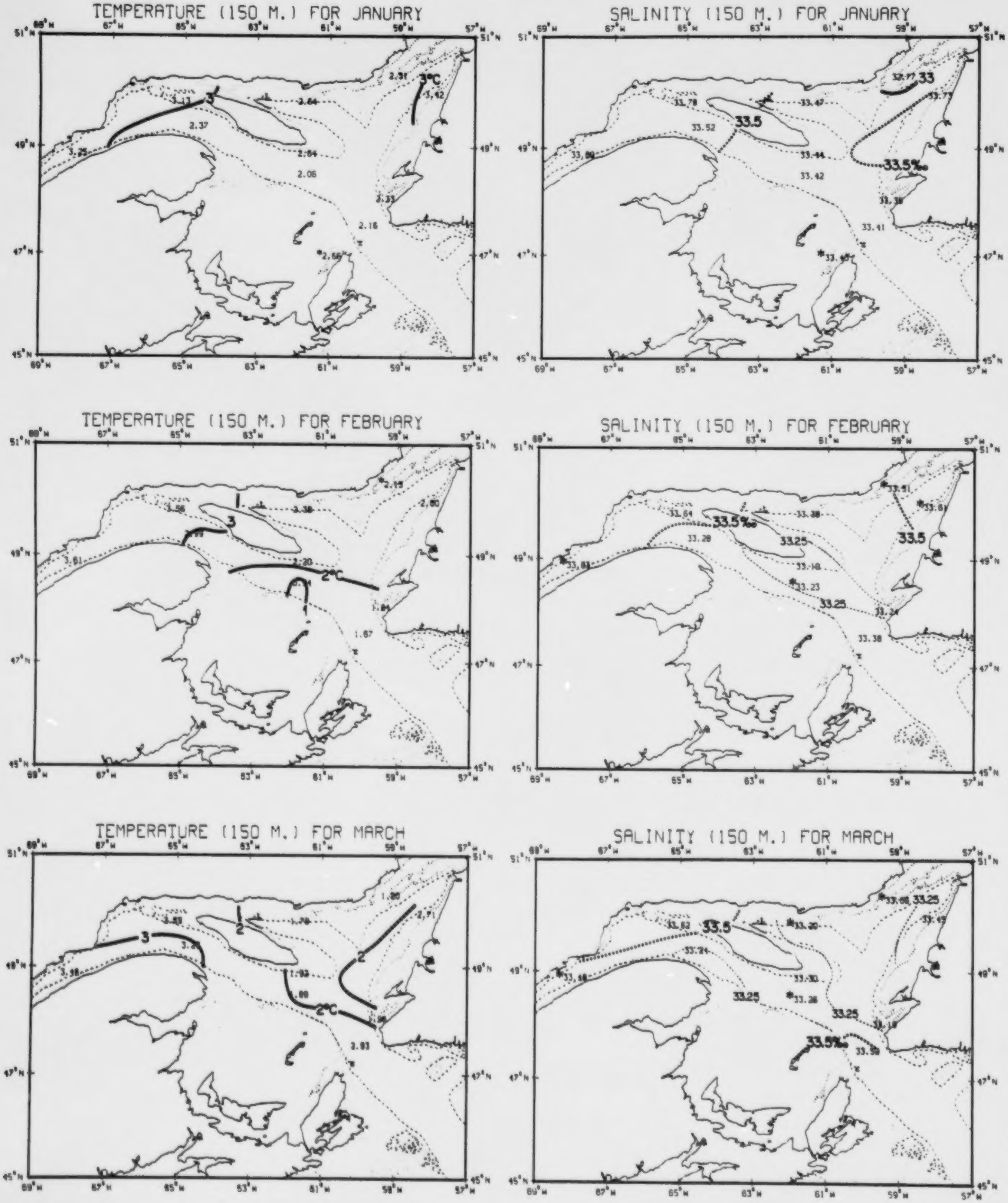

TEMPERATURE (100 M.) FOR OCTOBER
1°C
SALINITY (100 M.) FOR OCTOBER
33‰
32.75
32.5
TEMPERATURE (100 M.) FOR NOVEMBER
1°C
SALINITY (100 M.) FOR NOVEMBER
33‰
32.75
32.5
TEMPERATURE (100 M.) FOR DECEMBER
1°C
SALINITY (100 M.) FOR DECEMBER
33‰
32.5
32.75
51°N
49°N
47°N
45°N
69°W
67°W
65°W
63°W
61°W
59°W
57°W

Fig. 9d. Monthly mean 100m temperature and salinity, October to December.



TEMPERATURE (150 M.) FOR JANUARY

SALINITY (150 M.) FOR JANUARY

TEMPERATURE (150 M.) FOR FEBRUARY

SALINITY (150 M.) FOR FEBRUARY

TEMPERATURE (150 M.) FOR MARCH

SALINITY (150 M.) FOR MARCH

3
3°C
2°C
2
1
33
33.5
33.5‰
33.25
51°N
49°N
47°N
45°N
69°W
67°W
65°W
63°W
61°W
59°W
57°W

Fig. 10a. Monthly mean 150m temperature and salinity, January to March.

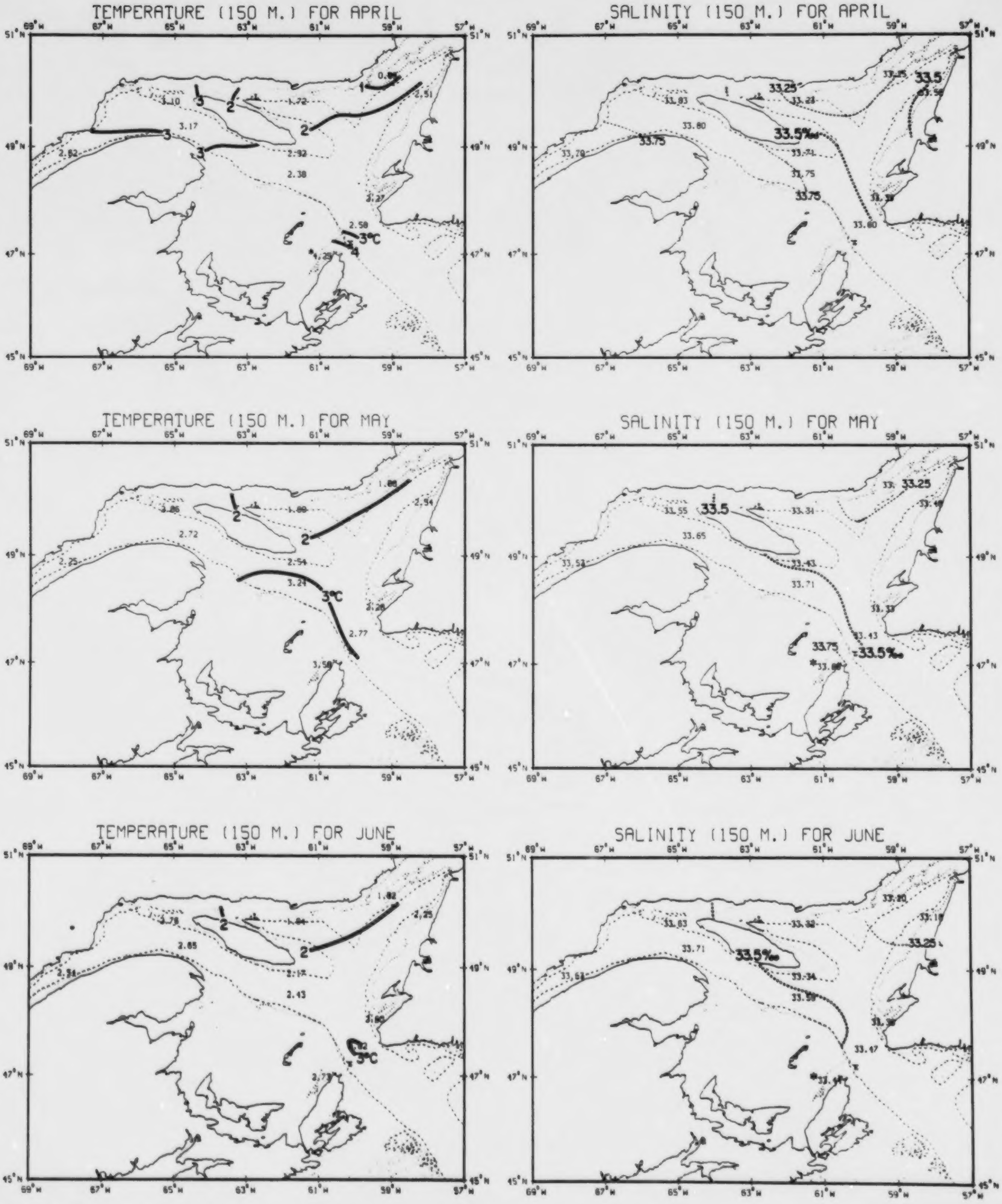

TEMPERATURE (150 M.) FOR APRIL
SALINITY (150 M.) FOR APRIL
TEMPERATURE (150 M.) FOR MAY
SALINITY (150 M.) FOR MAY
TEMPERATURE (150 M.) FOR JUNE
SALINITY (150 M.) FOR JUNE
69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
3°C
33.5‰
33.25
33.75
1
2
3
4

Fig. 10b. Monthly mean 150m temperature and salinity, April to June.

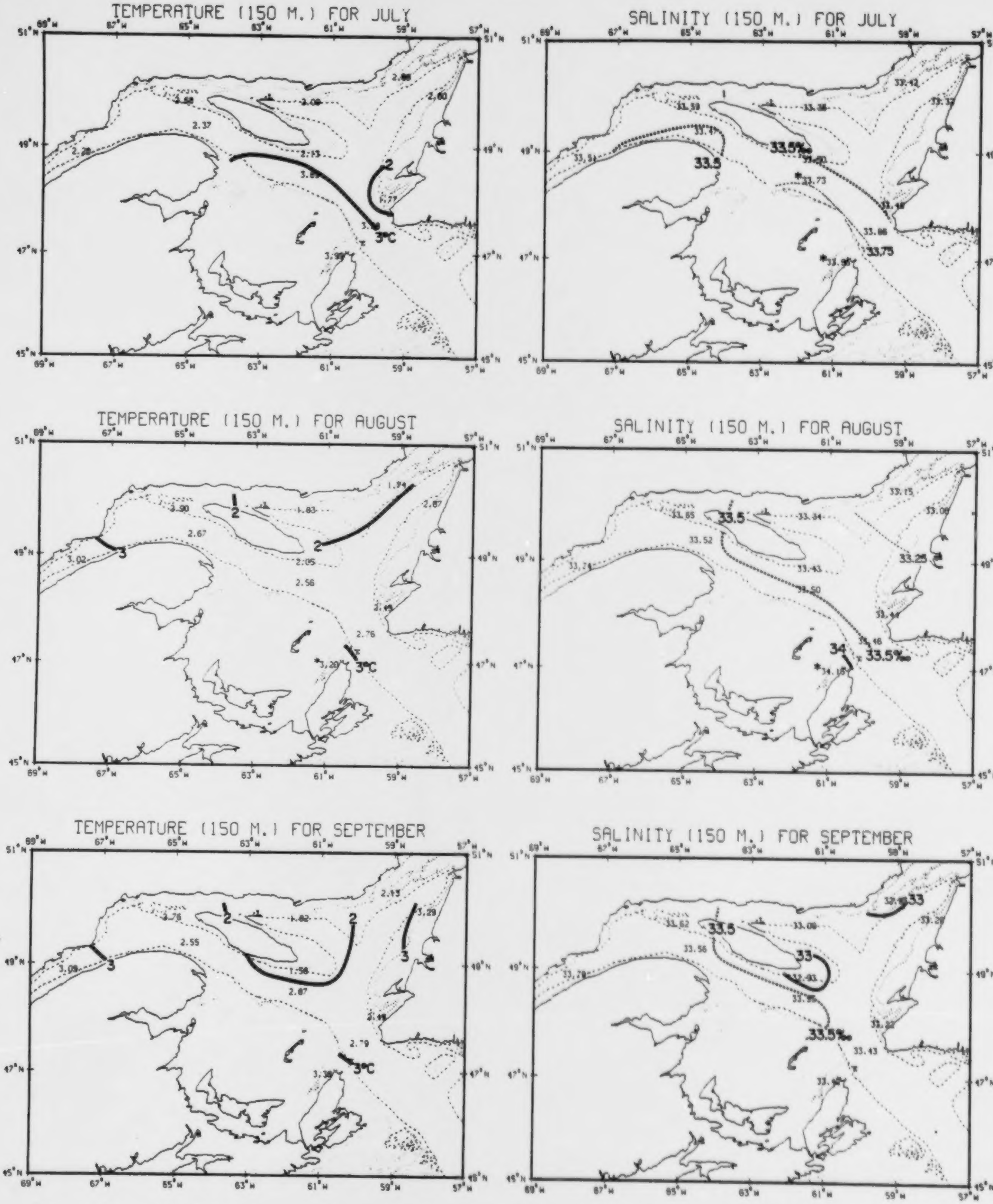

TEMPERATURE (150 M.) FOR JULY
SALINITY (150 M.) FOR JULY
TEMPERATURE (150 M.) FOR AUGUST
SALINITY (150 M.) FOR AUGUST
TEMPERATURE (150 M.) FOR SEPTEMBER
SALINITY (150 M.) FOR SEPTEMBER
69°W
67°W
65°W
63°W
61°W
59°W
57°W
51°N
49°N
47°N
45°N
2
3°C
33.5
33.5‰
33.75
3
34
33
2.37
2.13
2.67
2.56
2.76
2.05
1.83
2.55
2.87
2.79
33.52
33.43
33.50
33.56

Fig. 10c. Monthly mean 150m temperature and salinity, July to September.

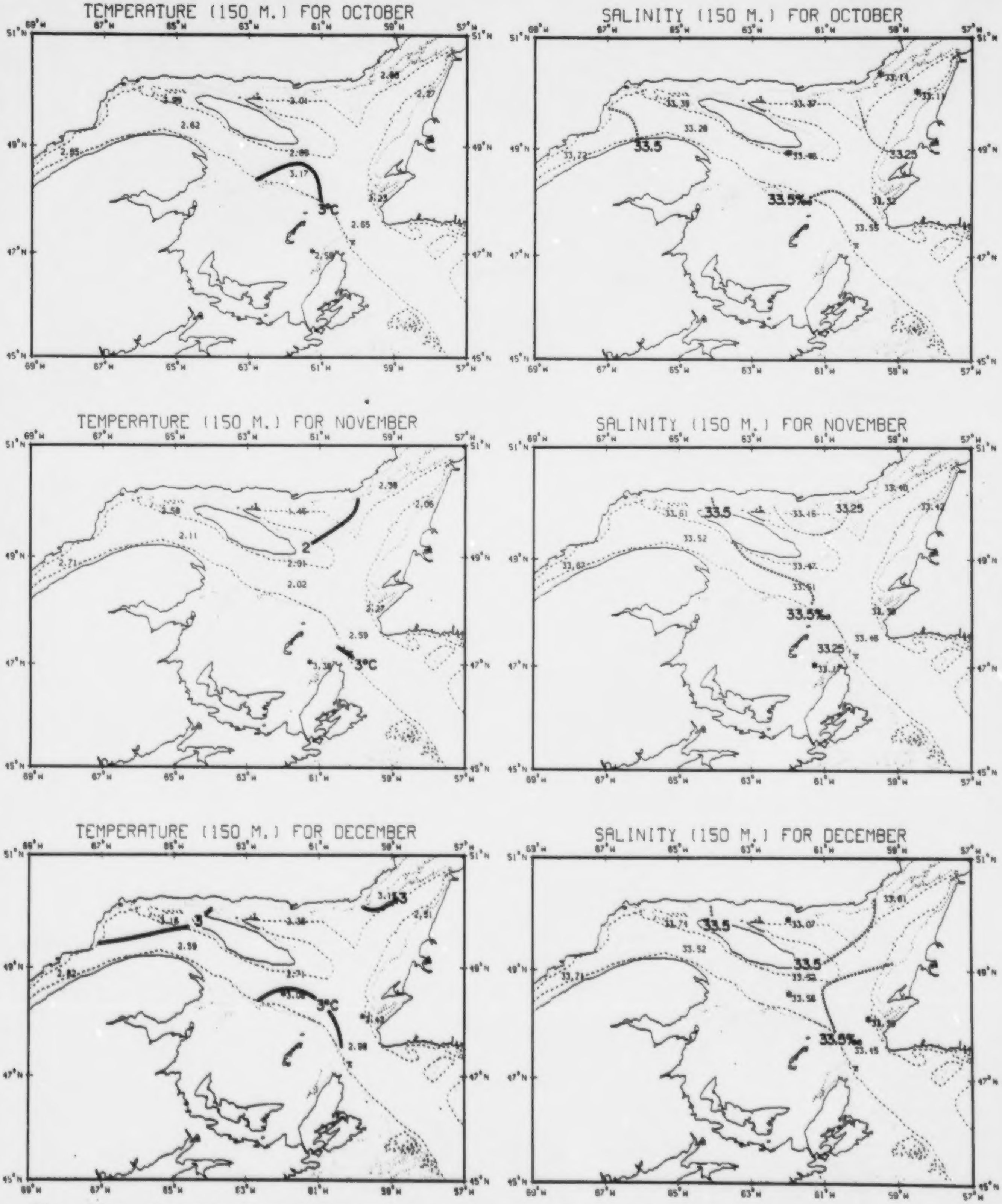

TEMPERATURE (150 M.) FOR OCTOBER
3°C
SALINITY (150 M.) FOR OCTOBER
33.5
33.5‰
TEMPERATURE (150 M.) FOR NOVEMBER
2
3°C
SALINITY (150 M.) FOR NOVEMBER
33.5
33.25
33.5‰
33.25
TEMPERATURE (150 M.) FOR DECEMBER
3
3
3°C
SALINITY (150 M.) FOR DECEMBER
33.5
33.5
33.5‰
51°N
49°N
47°N
45°N
69°W
67°W
65°W
63°W
61°W
59°W
57°W

Fig. 10d. Monthly mean 150m temperature and salinity, October to December.

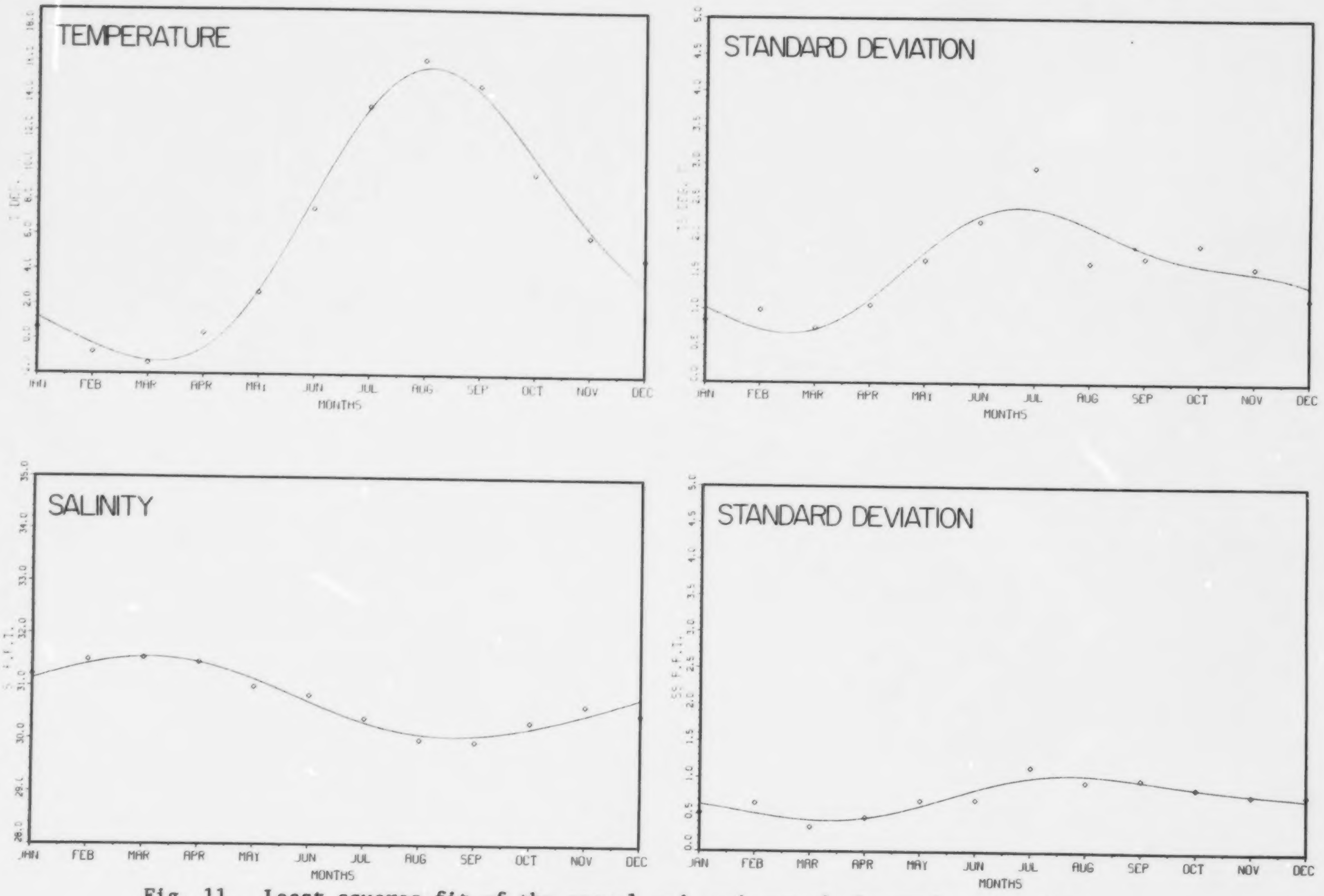


Fig. 11. Least squares fit of the annual and semi-annual harmonics to the monthly means and standard deviations of 0m temperature and salinity for area 1, Cabot Strait West.

APPENDIX 1

Monthly Mean Temperature and Salinity Data

Sigma-t Values

Standard Deviations and Number of Observations

TEMPERATURE (DEG-CEL) FOR SUBAREA 1 - CABOT STRAIT WEST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	.63	-.76	-1.38	.35	2.70	7.52	13.42	16.12	14.66	9.60	5.97	4.70
	.85	.99	.75	1.06	1.68	2.21	2.95	1.65	1.72	1.90	1.59	1.16
	142	69	109	59	360	399	266	333	198	138	391	6
10	.60	-.99	-1.40	.11	2.12	6.62	12.08	14.55	13.72	9.34	5.77	4.71
	.80	.57	.73	.92	1.46	2.04	2.97	3.42	2.58	1.97	1.49	1.15
	113	51	106	55	246	336	230	265	178	110	364	6
20	.61	-.97	-1.40	-.05	1.53	5.10	8.78	10.47	11.22	8.94	5.63	4.65
	.79	.60	.74	.87	1.24	2.12	3.49	4.97	3.93	1.91	1.47	1.13
	113	51	106	55	246	336	230	267	178	109	364	6
30	.65	-.94	-1.38	-.14	.99	3.28	4.60	5.43	6.35	7.30	5.36	4.58
	.75	.61	.75	.86	1.07	2.18	2.98	3.92	4.40	2.59	1.41	1.12
	113	50	105	55	246	336	230	265	174	107	361	6
50	.75	-.75	-1.33	-.30	.37	.92	1.13	1.74	2.17	2.66	3.76	4.16
	.72	.65	.80	.87	.95	1.29	1.14	1.39	2.61	2.49	1.67	1.58
	113	50	105	55	246	329	229	264	169	103	356	6
75	.90	-.35	-1.01	-.01	.48	.51	.69	1.18	1.35	1.34	1.82	2.32
	.68	.86	.84	.84	.82	.79	.80	.96	1.67	1.43	1.23	1.45
	86	46	100	51	224	303	216	248	157	89	282	6
100	1.12	.12	-.03	.71	1.00	.90	1.27	1.25	1.37	1.19	1.32	1.39
	.62	.67	.94	.83	.75	.80	.92	.89	.90	1.24	.80	.59
	74	37	78	48	202	278	205	228	147	79	247	4
125	1.41	.88	1.54	1.61	1.83	1.90	2.11	1.88	1.94	1.73	1.62	1.93
	.70	.49	.45	1.01	.95	1.06	1.08	.91	1.02	1.13	.82	.35
	73	36	77	47	189	263	192	212	114	74	231	4
150	2.16	1.67	2.93	2.58	2.77	3.02	3.28	2.76	2.79	2.65	2.59	2.98
	.89	.75	.79	1.03	1.15	1.05	1.08	1.02	1.18	1.05	1.03	.32
	68	35	74	43	174	237	164	186	99	58	206	4
175	3.03	2.71	3.98	3.82	3.58	3.90	4.27	3.61	3.58	3.62	3.64	3.97
	.81	1.09	.71	1.00	1.06	.78	.90	1.04	1.12	.89	.94	.86
	62	32	74	43	149	192	144	164	76	55	191	4
200	3.85	3.70	4.65	4.66	4.34	4.68	5.04	4.29	4.14	4.44	4.41	4.66
	.56	1.17	.52	.91	1.00	.77	.74	1.08	1.09	.77	.75	.86
	48	29	65	42	134	144	121	149	64	52	164	4
225	4.57	4.27	4.99	5.07	4.80	5.11	5.33	4.58	4.54	4.93	4.84	5.45
	.53	1.09	.36	.70	.91	.71	.60	.94	1.19	.68	.64	.54
	34	25	58	41	122	129	112	139	48	45	143	4
250	5.01	4.44	5.18	5.21	5.00	5.20	5.43	4.76	4.50	5.33	5.13	5.34
	.43	.96	.41	.66	.87	.67	.57	.79	1.27	.52	.62	.32
	24	23	47	36	86	97	90	115	32	30	101	4

TEMPERATURE (DEG-CEL) FOR SUBAREA 1 - CABOT STRAIT WEST

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	5.07	5.12	5.00	5.22	4.93	5.04	5.08	4.65	4.25	5.26	5.03	5.68
	.24	.66	.16	.45	.77	.71	.37	.57	.90	.38	.61	.16
	17	7	32	27	46	46	33	40	17	5	31	2
400	4.88	5.02	4.78	4.84	4.86	4.80	4.77	4.50	4.32	4.87	4.88	5.05
	.18	.44	.08	.22	.51	.45	.32	.37	.22	.34	.40	.06
	11	3	20	22	35	31	20	36	11	3	21	2

SALINITY FOR SUBAREA 1 - CABOT STRAIT WEST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.22	31.50	31.54	31.46	30.99	30.83	30.39	29.99	29.95	30.33	30.65	30.49
	.52	.65	.33	.46	.69	.70	1.15	.95	.99	.87	.78	.78
	50	31	95	41	172	148	100	147	87	31	96	6
10	31.45	31.32	31.50	31.52	31.10	30.93	30.57	30.17	30.07	30.39	30.62	30.54
	.42	.44	.65	.44	.61	.56	1.05	.91	.95	.86	.80	.76
	24	15	95	39	59	86	63	78	67	22	88	6
20	31.45	31.38	31.52	31.59	31.30	31.23	30.84	30.70	30.43	30.68	30.75	30.60
	.41	.43	.64	.39	.50	.50	.85	.99	1.03	.87	.81	.72
	24	15	95	39	59	86	63	78	67	22	88	6
30	31.51	31.46	31.54	31.64	31.53	31.40	31.35	31.27	31.04	31.00	30.92	30.66
	.37	.40	.64	.38	.37	.50	.81	.83	.97	.91	.81	.74
	24	15	94	39	59	87	63	78	67	22	88	6
50	31.64	31.71	31.62	31.82	31.85	31.86	32.01	31.96	31.78	31.78	31.47	30.93
	.28	.38	.61	.35	.28	.40	.59	.55	.79	.85	.81	.83
	24	15	94	39	60	87	62	78	67	21	89	6
75	32.14	32.08	31.81	32.26	32.28	32.35	32.48	32.46	32.30	32.48	32.16	31.91
	.42	.32	.49	.27	.23	.23	.47	.23	.59	.45	.92	.59
	24	14	89	36	57	77	56	71	63	18	75	6
100	32.72	32.47	32.17	32.73	32.68	32.66	32.85	32.73	32.70	32.78	32.76	32.67
	.36	.33	.33	.29	.31	.22	.48	.25	.44	.36	.29	.24
	20	11	68	35	53	70	53	68	59	16	61	4
125	33.09	32.95	32.97	33.19	33.07	33.06	33.23	33.12	33.05	33.11	33.08	33.10
	.28	.22	.21	.35	.32	.26	.52	.28	.42	.41	.29	.11
	20	11	67	34	53	67	50	66	50	16	59	4
150	33.41	33.38	33.59	33.60	33.43	33.47	33.66	33.46	33.43	33.55	33.46	33.45
	.32	.25	.26	.26	.37	.31	.57	.35	.44	.35	.34	.16
	20	10	64	32	55	66	47	57	45	15	57	4
175	33.74	33.87	33.98	33.96	33.77	33.81	33.99	33.77	33.68	33.90	33.81	33.76
	.33	.20	.22	.24	.28	.35	.34	.33	.47	.36	.32	.24
	21	8	64	32	47	56	34	51	35	14	55	4
200	34.06	34.17	34.23	34.22	34.06	34.11	34.24	34.02	33.96	34.16	34.09	34.00
	.28	.18	.19	.23	.27	.42	.45	.39	.48	.35	.31	.17
	19	9	59	32	46	55	32	45	32	14	54	4
225	34.32	34.33	34.40	34.42	34.26	34.31	34.42	34.20	34.13	34.40	34.29	34.30
	.23	.18	.17	.23	.19	.35	.34	.33	.53	.24	.31	.06
	19	8	53	32	45	54	32	44	26	13	52	4
250	34.53	34.42	34.52	34.49	34.41	34.46	34.54	34.33	34.20	34.50	34.41	34.41
	.21	.21	.14	.18	.14	.28	.27	.28	.60	.24	.30	.05
	18	8	43	30	46	51	28	41	20	10	44	4

SALINITY FOR SUBAREA 1 - CABOT STRAIT WEST

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.72	34.57	34.65	34.63	34.59	34.61	34.73	34.53	34.39	34.59	34.57	34.60
	.27	.21	.14	.17	.10	.34	.12	.19	.46	.30	.33	.00
	17	5	32	27	42	43	26	35	16	5	31	2
400	34.90	34.77	34.81	34.80	34.77	34.72	34.83	34.72	34.68	34.90	34.84	34.80
	.25	.05	.24	.04	.07	.33	.07	.17	.19	.12	.17	.01
	11	2	20	22	30	29	17	32	11	2	21	2

SIGMA-T FOR SUBAREA 1 - CABOT STRAIT WEST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.07	25.35	25.39	25.26	24.72	24.05	22.67	21.91	22.16	23.30	24.11	24.16
	.42	.52	.27	.34	.55	.73	1.27	.95	1.03	.92	.72	.64
	50	31	95	41	172	148	99	144	87	31	93	6
10	25.27	25.20	25.35	25.32	24.88	24.21	23.08	22.22	22.36	23.37	24.10	24.19
	.33	.35	.53	.33	.48	.62	1.15	1.04	.98	.97	.71	.62
	24	15	95	39	59	86	63	76	67	22	88	6
20	25.26	25.25	25.37	25.38	25.08	24.61	23.82	23.27	23.02	23.72	24.21	24.25
	.32	.34	.52	.30	.38	.54	1.09	1.41	1.25	.97	.71	.58
	24	15	95	39	59	86	63	78	67	22	88	6
30	25.31	25.32	25.38	25.43	25.28	24.93	24.82	24.50	24.20	24.14	24.38	24.29
	.28	.33	.52	.29	.29	.56	.90	1.13	1.31	1.01	.73	.61
	24	15	94	39	59	87	63	78	67	22	88	6
50	25.40	25.51	25.45	25.58	25.58	25.51	25.66	25.57	25.35	25.27	25.01	24.54
	.21	.30	.49	.26	.23	.40	.50	.47	.90	.90	.77	.72
	24	15	94	39	60	87	62	78	67	21	89	6
75	25.80	25.79	25.59	25.92	25.92	25.96	26.06	26.01	25.84	26.01	25.73	25.50
	.32	.25	.39	.20	.21	.22	.38	.21	.74	.40	.77	.59
	24	13	89	36	57	77	56	71	63	18	75	6
100	26.25	26.08	25.85	26.26	26.22	26.21	26.32	26.24	26.20	26.27	26.26	26.18
	.29	.26	.25	.21	.26	.19	.38	.19	.37	.29	.25	.22
	20	10	68	35	53	70	53	68	59	16	61	4
125	26.53	26.43	26.40	26.56	26.49	26.47	26.55	26.50	26.45	26.47	26.49	26.48
	.21	.17	.15	.24	.25	.20	.40	.20	.33	.29	.21	.11
	20	10	67	34	53	67	50	66	50	16	59	4
150	26.73	26.69	26.78	26.81	26.70	26.73	26.79	26.72	26.71	26.74	26.73	26.67
	.21	.17	.16	.14	.25	.22	.44	.24	.31	.22	.19	.11
	20	10	64	32	55	66	47	57	45	15	57	4
175	26.91	26.97	26.99	26.99	26.90	26.92	26.99	26.90	26.85	26.91	26.91	26.83
	.20	.11	.14	.13	.18	.23	.22	.23	.32	.22	.18	.11
	21	8	64	32	47	56	34	51	34	14	55	4
200	27.07	27.12	27.12	27.11	27.06	27.05	27.10	27.04	27.00	27.06	27.06	26.94
	.18	.09	.11	.11	.17	.30	.34	.26	.30	.23	.18	.06
	19	9	58	32	46	55	32	45	32	14	54	4
225	27.19	27.21	27.22	27.22	27.17	27.17	27.22	27.15	27.10	27.20	27.17	27.09
	.17	.09	.12	.14	.11	.24	.27	.22	.34	.15	.19	.02
	19	8	52	32	45	54	32	44	26	13	52	4
250	27.32	27.27	27.30	27.27	27.26	27.27	27.33	27.23	27.16	27.27	27.24	27.19
	.18	.12	.11	.10	.08	.17	.17	.19	.38	.17	.19	.03
	18	8	42	30	46	51	28	41	20	10	44	4

SIGMA-T FOR SUBAREA 1 - CABOT STRAIT WEST

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.47	27.38	27.41	27.38	27.38	27.38	27.48	27.37	27.30	27.46	27.35	27.30
	.21	.14	.11	.10	.08	.22	.10	.15	.29	.07	.25	.01
	17	5	32	27	42	43	26	35	16	4	31	2
400	27.63	27.54	27.57	27.56	27.54	27.50	27.60	27.54	27.52	27.65	27.58	27.53
	.20	.06	.18	.04	.05	.25	.06	.13	.15	.11	.14	0.00
	11	2	20	22	30	29	17	31	11	2	21	2

TEMPERATURE (DEG-CEL) FOR SUBAREA 2 - CABOT STRAIT EAST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	.98	-.31	-1.20	.60	2.74	6.84	11.88	15.16	12.35	8.95	5.34	3.63
	1.19	1.02	.91	1.44	1.41	2.05	2.24	2.19	2.97	2.10	1.44	1.31
	121	100	110	53	271	265	156	307	100	135	321	26
10	.93	-.50	-1.22	.33	2.15	6.10	10.69	13.61	11.44	8.56	5.24	3.87
	1.06	.88	.86	1.12	1.24	1.81	2.34	3.39	3.50	2.19	1.45	1.32
	120	87	114	54	216	241	147	241	96	128	299	21
20	.97	-.44	-1.19	.19	1.76	5.05	7.75	9.25	8.86	7.99	5.19	3.85
	1.00	.89	.90	1.03	1.19	1.95	2.72	4.75	4.54	2.22	1.46	1.31
	121	87	114	54	216	239	147	241	96	127	300	21
30	1.10	-.36	-1.18	.10	1.23	3.47	3.95	5.05	5.81	6.84	4.98	3.82
	.95	.90	.89	.96	1.10	2.20	2.49	3.47	4.14	2.45	1.52	1.31
	121	87	114	54	216	235	144	241	96	126	300	21
50	1.31	-.15	-1.10	-.04	.50	1.25	1.04	1.87	2.39	3.33	3.58	3.38
	.86	.89	.87	.87	1.04	1.27	.87	1.09	2.24	1.77	1.87	1.32
	121	87	115	54	210	231	141	240	92	126	298	21
75	1.55	.26	-.63	.07	.21	.45	.44	1.15	1.51	1.88	2.01	2.02
	.75	.87	.88	.78	.88	.66	.78	.91	1.41	1.07	1.56	1.51
	121	87	115	52	186	217	137	236	89	111	291	21
100	1.64	.69	.13	.59	.61	.74	.46	1.14	1.32	1.42	1.46	1.38
	.76	.81	.93	.75	.84	.65	.79	.87	.93	.83	1.12	.64
	118	86	114	52	179	201	133	225	82	103	282	20
125	1.79	1.14	1.21	1.43	1.35	1.57	.87	1.57	1.65	1.57	1.54	1.57
	.98	.88	.52	.90	.86	.76	.93	.94	.83	.82	.95	.61
	112	80	103	49	172	188	124	205	71	87	259	19
150	2.33	1.84	1.96	2.27	2.28	2.60	1.77	2.49	2.49	2.23	2.27	2.42
	1.40	1.08	.60	.76	.98	.95	1.05	1.01	1.12	1.02	1.27	1.02
	103	74	94	46	170	171	102	191	58	68	232	17
175	3.29	3.01	3.13	3.31	3.44	3.74	3.05	3.54	3.58	3.31	3.47	3.70
	1.59	1.19	.68	.89	1.00	.96	1.00	1.04	1.38	1.11	1.34	1.25
	98	70	76	42	163	167	98	178	56	62	206	14
200	4.38	4.13	4.21	4.32	4.52	4.68	4.17	4.32	4.73	4.25	4.44	4.72
	1.33	1.25	.78	.81	1.00	.85	.83	.96	1.50	.94	1.14	1.39
	96	64	68	40	153	160	96	164	46	58	188	12
225	5.14	4.76	4.95	4.92	5.15	5.20	4.73	4.78	5.28	4.93	4.99	5.65
	1.14	1.20	.69	.66	.94	.67	.55	.86	1.65	.75	.90	.79
	77	53	60	36	144	144	95	149	44	53	170	10
250	5.60	5.01	5.39	5.31	5.50	5.40	4.99	4.98	5.50	5.35	5.29	5.59
	.70	1.07	.31	.49	.85	.55	.33	.72	1.79	.65	.75	.40
	61	43	44	27	108	110	83	122	36	41	127	8

TEMPERATURE (DEG-CEL) FOR SUBAREA 2 - CABOT STRAIT EAST

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	5.51	5.41	5.16	5.19	5.35	5.29	4.94	4.75	5.61	4.87	5.14	5.71
	.43	.54	.26	.30	.75	.55	.22	.75	1.64	.47	.60	.30
	46	19	37	20	63	33	18	44	25	7	60	5
400	4.97	5.05	4.72	4.84	5.04	4.92	4.55	4.46	5.45	4.70	4.85	5.08
	.23	.40	.14	.10	.56	.35	.25	.53	1.27	.15	.35	.20
	24	11	21	13	47	20	6	33	16	3	41	5

SALINITY FOR SUBAREA 2 - CABOT STRAIT EAST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.74	31.82	31.81	31.80	31.22	31.27	31.13	30.74	31.18	31.35	31.56	31.59
	.26	.32	.47	.30	.48	.34	.68	.58	.64	.53	.47	.20
	43	19	89	30	125	79	37	121	31	25	107	9
10	31.73	31.84	31.84	31.83	31.27	31.41	31.20	31.16	31.25	31.39	31.58	31.61
	.27	.33	.15	.25	.43	.29	.65	.57	.66	.52	.38	.16
	44	19	95	31	71	55	28	65	27	26	107	9
20	31.74	31.88	31.84	31.88	31.50	31.58	31.57	31.52	31.62	31.56	31.63	31.79
	.28	.32	.15	.25	.36	.29	.42	.59	.72	.52	.38	.35
	45	19	95	31	71	55	28	65	27	25	108	9
30	31.79	31.89	31.86	31.91	31.71	31.79	31.87	31.88	31.92	31.76	31.74	31.84
	.33	.29	.15	.24	.34	.28	.27	.41	.53	.47	.35	.37
	45	18	95	31	71	55	28	65	27	25	108	9
50	31.87	32.03	31.90	32.04	31.96	32.12	32.21	32.24	32.19	32.22	32.11	32.19
	.40	.21	.15	.21	.29	.23	.18	.27	.43	.27	.37	.46
	45	19	96	31	71	56	28	65	27	26	108	9
75	32.10	32.25	32.02	32.25	32.25	32.41	32.43	32.50	32.44	32.49	32.49	32.73
	.46	.21	.49	.20	.31	.19	.18	.23	.36	.21	.34	.84
	45	18	97	31	71	54	27	65	27	24	106	9
100	32.59	32.61	32.35	32.59	32.57	32.69	32.74	32.75	32.64	32.74	32.76	32.81
	.50	.19	.29	.28	.36	.20	.27	.24	.34	.25	.33	.19
	45	19	96	31	70	52	26	61	23	23	105	8
125	33.03	32.95	32.79	33.00	32.95	33.01	33.08	33.10	32.91	32.99	33.04	33.11
	.33	.21	.23	.33	.38	.24	.33	.27	.35	.29	.33	.20
	45	18	96	28	68	50	26	54	23	20	99	8
150	33.35	33.24	33.19	33.35	33.33	33.38	33.46	33.44	33.22	33.32	33.36	33.39
	.32	.25	.23	.40	.41	.31	.34	.31	.43	.40	.39	.31
	45	16	87	26	67	49	26	50	21	19	97	7
175	33.65	33.66	33.59	33.72	33.75	33.75	33.87	33.78	33.55	33.68	33.76	33.83
	.34	.20	.22	.34	.43	.28	.29	.28	.54	.35	.42	.40
	44	16	69	23	66	48	23	47	20	17	82	6
200	33.95	34.03	33.96	34.09	34.17	34.10	34.19	34.08	33.89	33.99	34.10	34.10
	.37	.22	.22	.32	.21	.25	.25	.25	.56	.30	.31	.47
	44	15	63	22	65	44	22	45	20	17	75	6
225	34.16	34.21	34.24	34.32	34.40	34.34	34.35	34.27	34.09	34.25	34.32	34.44
	.41	.22	.21	.29	.18	.20	.20	.22	.58	.19	.24	.13
	40	13	56	20	60	37	21	40	19	16	68	5
250	34.42	34.37	34.49	34.49	34.54	34.48	34.50	34.43	34.22	34.44	34.47	34.52
	.34	.27	.06	.25	.10	.15	.17	.19	.56	.17	.19	.05
	36	12	40	18	59	33	20	40	18	12	59	4

SALINITY FOR SUBAREA 2 - CABOT STRAIT EAST

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.69	34.56	34.66	34.70	34.72	34.67	34.65	34.61	34.46	34.64	34.63	34.66
	.29	.33	.03	.19	.12	.10	.17	.13	.43	.11	.16	.03
	35	11	35	18	52	27	17	32	16	7	48	4
400	34.83	34.85	34.80	34.92	34.85	34.86	34.78	34.78	34.80	34.78	34.83	34.82
	.17	.05	.04	.29	.06	.08	.08	.06	.09	.12	.12	.03
	20	4	20	12	40	19	6	24	9	3	35	4

SIGMA-T FOR SUBAREA 2 - CABOT STRAIT EAST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.42	25.60	25.60	25.53	24.93	24.54	23.51	22.67	23.63	24.37	24.91	25.04
	.23	.25	.38	.28	.39	.35	.72	.73	.90	.61	.45	.18
	43	19	89	30	125	78	37	121	31	25	107	9
10	25.41	25.61	25.63	25.57	25.05	24.72	23.84	23.36	23.84	24.47	24.93	25.05
	.23	.26	.12	.21	.33	.31	.75	.94	1.03	.64	.38	.15
	44	18	95	31	71	54	28	65	27	26	107	9
20	25.42	25.64	25.63	25.61	25.25	24.98	24.73	24.28	24.60	24.68	24.97	25.21
	.25	.25	.12	.20	.30	.32	.61	1.13	1.15	.71	.38	.31
	45	18	95	31	71	54	28	65	27	25	108	9
30	25.45	25.66	25.64	25.64	25.44	25.31	25.37	25.14	25.21	24.94	25.08	25.24
	.28	.22	.12	.19	.28	.32	.40	.79	.86	.68	.37	.29
	45	18	95	31	71	54	28	65	27	25	108	9
50	25.50	25.75	25.67	25.75	25.68	25.75	25.83	25.78	25.60	25.70	25.52	25.60
	.33	.16	.12	.17	.26	.23	.14	.27	.75	.31	.43	.38
	45	18	96	31	71	55	28	65	27	26	108	9
75	25.68	25.91	25.75	25.91	25.91	26.01	26.02	26.04	25.91	26.01	25.96	26.17
	.37	.15	.39	.16	.25	.15	.13	.22	.50	.22	.38	.68
	45	18	97	31	71	54	27	65	27	24	106	9
100	26.09	26.18	25.99	26.17	26.15	26.23	26.28	26.26	26.14	26.23	26.23	26.27
	.40	.14	.20	.21	.29	.15	.19	.19	.35	.20	.30	.16
	45	18	96	31	70	52	26	61	23	23	105	8
125	26.46	26.43	26.28	26.44	26.42	26.44	26.51	26.51	26.35	26.41	26.45	26.50
	.23	.15	.16	.25	.32	.16	.24	.19	.29	.21	.23	.13
	45	18	96	28	67	50	26	54	23	20	99	8
150	26.68	26.62	26.55	26.64	26.67	26.67	26.73	26.72	26.56	26.62	26.65	26.65
	.19	.16	.15	.31	.33	.19	.22	.22	.32	.23	.24	.17
	45	16	87	26	66	49	26	50	21	19	97	7
175	26.85	26.85	26.77	26.86	26.87	26.88	26.94	26.91	26.74	26.81	26.86	26.86
	.18	.12	.13	.23	.34	.16	.15	.18	.37	.19	.26	.18
	44	16	69	23	66	48	23	47	20	17	82	6
200	26.98	27.04	26.96	27.06	27.08	27.06	27.10	27.07	26.94	26.99	27.04	26.98
	.22	.13	.11	.20	.09	.13	.12	.16	.36	.16	.16	.20
	44	15	63	22	65	44	22	45	20	17	75	6
225	27.07	27.13	27.11	27.18	27.19	27.19	27.21	27.19	27.07	27.14	27.16	27.14
	.24	.14	.10	.21	.09	.10	.11	.15	.37	.09	.14	.04
	40	13	56	20	60	37	21	40	19	16	68	5
250	27.21	27.21	27.26	27.28	27.27	27.28	27.31	27.29	27.15	27.25	27.26	27.22
	.24	.21	.04	.18	.08	.08	.10	.13	.34	.09	.11	.04
	36	11	40	18	59	33	20	40	18	12	59	4

SIGMA-T FOR SUBAREA 2 - CABOT STRAIT EAST

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.41	27.34	27.42	27.44	27.42	27.42	27.43	27.44	27.31	27.42	27.40	27.34
	.23	.26	.03	.15	.07	.06	.13	.11	.28	.04	.11	.04
	35	11	35	18	52	27	17	32	16	7	48	4
400	27.57	27.61	27.58	27.65	27.56	27.60	27.58	27.60	27.60	27.55	27.58	27.55
	.14	.02	.03	.23	.04	.05	.07	.07	.08	.11	.10	.05
	20	4	20	12	40	18	6	24	9	3	35	4

TEMPERATURE (DEG-CEL) FOR SUBAREA 3 - ESQUIMAN CHANNEL, NFLD. SHORE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	.33	-.49	-.77	.02	2.62	6.87	12.28	14.82	12.20	7.56	4.84	2.20
	.95	.74	.88	1.09	1.54	2.09	1.80	1.83	2.38	1.89	1.66	.91
	172	35	8	40	177	238	208	293	188	144	323	26
10	.38	-.80	-.81	-.09	2.09	6.15	11.38	13.57	11.81	7.79	4.57	2.34
	.91	.63	.88	.97	1.38	1.89	1.83	2.37	2.44	1.83	1.73	.85
	147	30	8	40	158	223	204	256	184	110	228	23
20	.45	-.77	-.77	-.20	1.55	4.91	8.14	10.09	10.50	7.41	4.37	2.31
	1.00	.72	.91	.92	1.24	1.79	3.20	4.10	3.23	1.88	1.50	.86
	147	30	8	40	157	222	196	256	183	106	227	23
30	.51	-.73	-.74	-.36	.88	3.15	4.58	5.58	6.47	5.99	4.03	2.25
	.98	.80	.93	.83	1.24	1.85	3.17	4.00	4.44	2.58	1.59	.88
	147	30	8	40	157	212	179	255	182	107	228	23
50	.56	-.66	-.63	-.56	-.08	.73	.83	1.31	1.28	1.59	1.97	1.28
	.95	.65	.89	.90	.95	1.49	1.45	1.99	2.46	2.13	1.76	.79
	147	30	8	40	152	191	148	240	169	104	212	23
75	.86	-.07	-.63	-.41	-.05	.14	.04	.27	.12	.43	.73	.56
	.84	.90	.98	.81	.77	1.07	.85	.79	.74	.76	1.11	.54
	141	30	6	32	136	147	113	193	138	92	187	18
100	1.46	.79	.41	.47	.43	.32	.30	.60	.86	.61	.67	.69
	.77	.91	.52	.83	.80	.66	.91	1.14	.92	.73	.85	.35
	122	29	6	27	113	112	91	123	114	89	171	17
125	2.36	1.78	1.47	1.46	1.33	1.06	1.23	1.65	2.13	1.40	1.18	1.35
	1.03	.85	.73	.94	1.02	.99	1.19	1.68	1.03	.88	.92	.35
	102	27	6	26	101	92	79	104	106	77	152	16
150	3.42	2.80	2.71	2.51	2.54	2.25	2.60	2.67	3.29	2.27	2.06	2.51
	1.13	.89	.48	1.01	1.05	1.12	1.40	1.44	1.16	1.00	1.01	.46
	82	23	6	24	96	74	63	92	95	73	132	10
175	4.29	3.85	3.80	3.58	3.72	3.41	3.92	3.81	4.34	3.27	3.08	3.72
	.99	.89	.47	.86	.98	1.06	1.50	1.40	1.16	.86	.97	.33
	67	22	6	20	85	58	52	81	92	66	127	8
200	4.95	4.64	4.52	4.45	4.56	4.33	4.85	4.68	5.10	4.17	4.04	4.63
	.80	.84	.40	.83	.85	1.04	1.62	1.30	1.07	.62	.82	.23
	58	19	6	16	75	46	43	73	82	56	99	7
225	5.33	4.90	4.85	4.83	5.04	4.96	5.19	5.28	5.54	4.83	4.64	4.96
	.72	.91	.47	.61	.81	.78	1.45	1.35	1.05	.39	.66	.19
	40	14	5	13	58	32	32	52	62	44	82	4
250	5.58	5.02	5.07	5.08	5.49	5.40	5.27	5.62	5.68	5.25	5.11	5.06
	.68	1.03	.57	.40	.72	.61	.50	1.69	.98	.34	.54	.17
	28	10	3	7	31	21	19	28	41	17	35	3

TEMPERATURE (DEG-CEL) FOR SUBAREA 3 - ESQUIMAN CHANNEL, NFLD. SHORE

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	5.62	5.53	5.23	5.19	5.63	5.37		5.71	5.98		5.26	
	.62	.66	.00	.17	.55	.57		.76	.96		.07	
	9	3	2	3	11	4		7	12		6	

SALINITY FOR SUBAREA 3 - ESQUIMAN CHANNEL, NFLD. SHORE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.87	32.53	32.03	31.77	31.50	31.18	30.33	30.53	30.89	31.22	31.38	31.39
	.28	.95	.10	.26	.35	1.01	1.37	.30	.37	.41	.40	.15
	20	4	5	35	59	50	36	97	36	10	47	4
10	31.87	32.06	32.03	31.79	31.61	31.20	30.58	30.86	30.92	31.21	31.44	31.39
	.30	.07	.11	.26	.28	1.14	1.32	.25	.34	.34	.27	.15
	20	4	5	35	40	34	33	71	36	12	48	4
20	31.89	32.05	32.06	31.82	31.68	31.62	31.18	31.46	31.11	31.33	31.46	31.40
	.33	.07	.09	.30	.26	.23	.35	.25	.37	.35	.28	.16
	20	4	5	35	39	32	34	71	36	10	48	4
30	31.90	32.05	32.08	31.86	31.81	31.78	31.65	31.79	31.47	31.52	31.50	31.54
	.35	.07	.08	.32	.25	.21	.48	.26	.47	.38	.31	.26
	20	4	5	35	39	33	33	71	36	10	48	4
50	32.01	32.12	32.09	32.04	32.11	32.00	32.00	32.10	32.06	32.03	32.05	32.19
	.37	.06	.06	.37	.31	.18	.30	.23	.33	.19	.42	.29
	20	4	5	35	39	33	28	71	34	10	40	4
75	32.70	32.64	32.14	32.39	32.48	32.30	32.30	32.43	32.49	32.46	32.51	33.39
	.40	.38	.10	.25	.33	.13	.27	.24	.23	.05	.34	1.22
	17	4	5	28	36	29	22	61	26	5	29	2
100	33.11	33.01	32.49	32.81	32.85	32.61	32.67	32.76	32.78	32.72	32.78	33.72
	.22	.19	.25	.17	.39	.22	.34	.28	.23	.05	.30	1.33
	14	4	5	23	30	21	15	21	19	5	27	2
125	33.43	33.23	32.96	33.20	33.13	32.89	32.99	32.93	33.02	32.92	33.10	33.19
	.22	.21	.34	.17	.36	.29	.30	.48	.22	.20	.29	
	14	3	5	22	28	17	15	17	16	4	23	1
150	33.73	33.61	33.45	33.56	33.48	33.18	33.32	33.06	33.29	33.11	33.42	
	.26	.15	.27	.25	.30	.37	.43	.83	.28	.35	.23	
	12	3	5	20	27	16	14	14	15	4	12	
175	33.98	33.96	33.85	33.85	33.83	33.45	33.67	33.56	33.67	33.60	33.71	
	.24	.11	.19	.31	.28	.26	.34	.43	.18	.25	.30	
	10	3	5	16	24	9	8	10	13	3	9	
200	34.24	34.15	34.12	34.16	34.12	33.77	33.96	33.98	33.95	34.01	34.14	
	.21	.02	.14	.33	.24	.32	.31	.25	.14	.13	.24	
	9	2	5	14	22	8	6	8	10	3	6	
225	34.53	34.31	34.31	34.35	34.28	34.13	34.30	34.22	34.03	34.21	34.25	
	.35	.08	.13	.22	.28	.17	.20	.25	.21	.05	.23	
	4	2	4	11	16	5	3	6	7	3	4	
250	34.36	34.44	34.44	34.38	34.28	34.35	34.56	34.31	34.14	34.37	34.57	
	.07	.12	.14	.12	.10	.22	.16	.29	.38	.04		
	2	2	3	7	10	3	2	4	7	2	1	

SALINITY FOR SUBAREA 3 - ESQUIMAN CHANNEL, NFLD. SHORE

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.39	34.65	34.65	34.52	34.57	34.49			34.25			
			.00	.11	.14	.18						
	1	1	2	3	3	2			1			

SIGMA-T FOR SUBAREA 3 - ESQUIMAN CHANNEL, NFLD. SHORE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.55	25.83	25.76	25.52	25.19	24.48	23.02	22.59	23.36	24.41	24.88	24.97
	.27	.09	.11	.22	.34	.86	1.27	.42	.75	.47	.35	.09
	20	2	5	35	59	47	36	97	36	10	47	4
10	25.55	25.83	25.75	25.55	25.35	24.54	23.40	23.30	23.44	24.42	24.93	24.97
	.28	.09	.12	.22	.24	.95	1.23	.42	.72	.50	.28	.10
	20	2	5	35	40	32	33	71	36	12	48	4
20	25.56	25.83	25.78	25.57	25.43	25.05	24.31	24.52	23.85	24.55	24.95	24.97
	.30	.09	.11	.25	.22	.28	.49	.60	.76	.54	.30	.10
	20	2	5	35	39	30	34	71	36	10	48	4
30	25.58	25.83	25.79	25.61	25.55	25.33	25.07	25.24	24.57	24.86	24.99	25.09
	.32	.09	.09	.26	.21	.25	.57	.49	.94	.54	.32	.20
	20	2	5	35	39	31	33	71	36	10	48	4
50	25.65	25.86	25.80	25.77	25.81	25.65	25.64	25.75	25.62	25.68	25.60	25.76
	.34	.05	.07	.29	.27	.20	.38	.21	.49	.20	.45	.30
	20	2	5	35	39	31	28	71	34	10	40	4
75	26.21	26.01	25.85	26.05	26.11	25.94	25.94	26.05	26.12	26.10	26.06	26.74
	.32	.01	.08	.17	.26	.13	.28	.20	.19	.11	.33	.93
	17	2	5	28	36	27	22	61	26	5	29	2
100	26.52	26.38	26.09	26.33	26.37	26.20	26.23	26.31	26.33	26.29	26.29	27.01
	.19	.03	.18	.11	.29	.16	.29	.21	.20	.04	.25	1.02
	14	2	5	23	30	20	15	21	19	5	27	2
125	26.74	26.55	26.41	26.58	26.55	26.38	26.44	26.40	26.50	26.42	26.50	26.56
	.18	.04	.25	.09	.26	.19	.22	.37	.17	.09	.21	
	14	2	5	22	28	17	15	17	16	4	23	1
150	26.93	26.80	26.70	26.79	26.75	26.56	26.65	26.46	26.66	26.53	26.70	
	.20	.02	.18	.13	.22	.23	.28	.67	.20	.20	.16	
	12	2	5	20	27	16	14	14	15	4	12	
175	27.06	26.99	26.92	26.91	26.94	26.72	26.87	26.79	26.87	26.81	26.86	
	.19	.04	.11	.17	.19	.14	.17	.27	.12	.13	.20	
	10	2	5	16	24	9	8	10	13	3	9	
200	27.20	27.12	27.06	27.07	27.08	26.91	27.01	27.05	27.04	27.03	27.11	
	.17	.01	.07	.20	.17	.17	.14	.14	.09	.06	.12	
	9	2	5	14	22	8	6	8	10	3	6	
225	27.40	27.21	27.16	27.18	27.18	27.11	27.21	27.17	27.07	27.14	27.18	
	.26	.05	.04	.13	.19	.12	.05	.16	.17	.01	.13	
	4	2	4	11	16	5	3	6	7	3	4	
250	27.27	27.29	27.24	27.20	27.16	27.22	27.33	27.22	27.13	27.22	27.36	
	.07	.08	.05	.05	.06	.15	.11	.20	.33	.01		
	2	2	3	7	10	3	2	4	7	2	1	

SIGMA-T FOR SUBAREA 3 - ESQUIMAN CHANNEL, NFLD. SHORE

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.29	27.44	27.38	27.29	27.34	27.30			27.27			
			0.00	.06	.01	.17						
	1	1	2	3	3	2			1			

TEMPERATURE (DEG-CEL) FOR SUBAREA 4 - ESQUIMAN CHANNEL, QUEBEC SHORE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.57	-1.28	-.67	.06	1.61	5.06	11.83	13.23	10.97	6.49	3.32	2.02
	.85	.59	.94	1.04	1.37	1.83	2.24	2.38	2.47	1.60	1.28	.73
	49	36	5	57	83	124	117	116	145	87	163	14
10	-.57	-1.45	-.76	-.10	1.38	4.03	10.33	11.83	10.71	6.34	3.19	2.10
	.83	.28	1.01	.93	1.17	1.85	2.84	2.77	2.61	1.61	1.22	.72
	43	31	5	57	82	123	116	108	129	77	153	14
20	-.56	-1.44	-.84	-.30	.72	2.45	5.28	7.22	9.36	6.00	3.16	2.24
	.85	.29	.86	.84	1.15	1.91	2.82	3.95	3.01	1.55	1.21	.75
	44	31	5	57	82	121	115	108	129	76	153	14
30	-.51	-1.43	-.89	-.47	.14	1.14	1.97	4.24	6.18	5.41	2.99	2.14
	.97	.30	.74	.78	1.03	1.63	1.73	3.27	3.22	1.44	1.19	.72
	44	31	5	57	82	121	115	106	126	76	152	14
50	-.29	-1.39	-.85	-.80	-.65	-.19	.09	1.80	2.82	1.85	1.64	1.49
	1.15	.31	.66	.75	.69	.81	1.10	2.33	2.65	1.99	1.44	.62
	44	31	5	56	81	119	113	97	118	74	152	14
75	.08	-1.14	-.36	-.95	-.77	-.41	-.23	.69	1.29	1.01	.92	.79
	.93	.58	.94	.77	.67	.70	.57	1.66	1.89	1.52	1.18	.48
	44	31	4	49	72	103	97	84	98	65	138	14
100	.87	-.46	.25	-.72	-.43	-.11	.15	.29	.70	.81	.88	1.19
	1.12	.84	1.62	1.10	.96	1.08	.72	1.02	1.29	.70	.81	.44
	40	27	4	39	62	84	83	63	74	54	122	14
125	1.49	1.03	.42	-.07	.67	.60	1.21	.77	.94	1.65	1.40	2.00
	1.55	1.41	1.94	1.70	1.50	1.56	.97	1.26	1.25	.85	.85	.56
	37	24	4	33	45	68	66	47	49	44	104	11
150	2.31	2.15	1.20	.86	1.88	1.82	2.88	1.74	2.13	2.66	2.39	3.19
	1.88	1.73	3.41	2.32	1.87	1.72	1.14	1.52	1.69	.99	1.01	.62
	28	15	2	25	40	41	48	35	32	40	82	10
175	3.20	3.71	1.50	1.41	3.41	3.12	4.10	2.62	3.62	3.71	3.48	4.10
	2.11	1.07	4.10	2.74	1.68	1.67	1.12	1.81	1.48	.86	.93	.60
	24	12	2	18	32	32	44	30	27	35	72	10
200	3.50	4.49	5.06	3.14	4.29	3.85	4.91	3.76	4.60	4.44	4.37	4.64
	2.48	.89		2.73	1.74	1.80	.75	1.60	1.59	.59	.63	.56
	20	9	1	10	21	29	38	25	24	32	60	9
225	5.17	4.88	5.33	5.21	4.78	4.78	5.23	4.19	5.38	5.01	4.78	4.91
	.72	.90		.52	1.00	.92	.89	1.65	1.17	.51	.65	.33
	13	9	1	5	15	25	31	20	22	21	51	7
250	5.35	4.86	5.19	5.31	5.73	5.08	5.29	4.90	5.53	5.35	5.01	5.20
	.70	1.01		.69	.48	.91	1.03	.63	.69	.40	.69	.31
	11	6	1	2	6	14	22	16	13	17	24	6

SALINITY FOR SUBAREA 4 - ESQUIMAN CHANNEL, QUEBEC SHORE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.93	32.15	32.12	31.92	31.52	30.65	30.22	30.52	30.85	31.29	31.50	31.16
	.23	.26	.23	.48	.53	1.22	.85	.60	.55	.23	.32	.47
	17	9	4	48	29	29	30	43	39	10	88	7
10	31.91	32.17	32.11	31.95	31.48	31.18	30.54	30.77	30.82	31.33	31.51	31.44
	.22	.20	.25	.44	.34	.84	.69	.51	.43	.22	.32	.74
	17	8	4	49	28	28	30	39	39	11	89	7
20	31.90	32.15	32.18	32.01	31.82	31.64	31.35	31.21	31.02	31.41	31.53	31.65
	.21	.11	.28	.40	.34	.40	.38	.44	.38	.22	.31	.71
	19	7	4	49	28	26	29	39	39	10	89	7
30	31.91	32.21	32.22	32.06	32.00	31.86	31.77	31.56	31.35	31.60	31.57	31.76
	.21	.17	.30	.40	.39	.31	.47	.41	.41	.24	.31	.94
	19	8	4	49	28	26	29	37	39	10	88	7
50	31.98	32.30	32.26	32.26	32.34	32.25	32.17	31.90	31.73	31.95	31.93	32.09
	.17	.23	.29	.41	.29	.24	.38	.44	.40	.35	.36	1.00
	19	9	4	48	28	27	28	32	38	10	88	7
75	32.17	32.32	32.33	32.47	32.55	32.46	32.53	32.26	32.10	32.18	32.27	32.68
	.28	.17	.24	.37	.23	.19	.60	.40	.33	.37	.39	1.03
	19	7	3	43	23	23	21	28	27	8	79	7
100	32.42	32.61	32.62	32.69	32.70	32.73	32.65	32.60	32.38	32.61	32.58	32.68
	.46	.25	.35	.35	.26	.34	.27	.24	.37	.27	.44	.57
	17	8	3	34	19	19	16	18	22	7	71	6
125	32.57	32.93	32.75	32.94	32.89	32.97	33.05	32.85	32.66	32.86	32.99	33.23
	.55	.35	.51	.40	.36	.31	.49	.34	.40	.42	.41	.17
	17	5	3	29	9	13	9	10	14	4	59	5
150	32.77	33.51	33.06	33.25	33.13	33.20	33.42	33.15	32.95	33.14	33.40	33.61
	.69	.49	.96	.51	.41	.37	.37	.43	.52	.54	.44	.16
	12	3	2	21	7	9	7	10	10	4	47	5
175	33.10	33.96	33.24	33.39	33.57	33.62	33.74	33.47	33.28	33.57	33.81	33.91
	.85	.19	1.15	.61	.49	.32	.37	.39	.57	.57	.36	.12
	10	3	2	15	5	7	5	10	8	3	39	5
200	33.27	34.29	34.30	33.93	34.03	33.93	33.95	33.82	33.34	34.17	34.15	34.14
	.96	.07		.49	.12	.33	.59	.27	.55	.09	.30	.15
	10	2	1	8	4	7	3	9	6	3	34	5
225	34.32	34.48	34.46	34.42	34.40	34.18	33.75	33.98	33.79	34.41	34.33	34.30
	.06	.02		.16	.14	.31	.71	.34	.19		.31	.13
	4	2	1	5	3	6	2	7	3	1	30	5
250	34.43	34.57	34.56	34.53		34.27	34.36	34.30	33.83	34.58	34.44	34.46
	.06			.25		.26		.12	.57		.33	.10
	4	1	1	2		4	1	5	3	1	14	5

SIGMA-T FOR SUBAREA 4 - ESQUIMAN CHANNEL, QUEBEC SHORE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.66	25.88	25.83	25.64	25.29	24.23	23.15	23.05	23.44	24.51	25.11	24.89
	.20	.21	.22	.41	.42	1.08	.84	.61	.77	.30	.30	.34
	17	9	4	48	29	29	30	43	39	10	88	7
10	25.65	25.85	25.82	25.67	25.28	24.74	23.68	23.55	23.47	24.57	25.12	25.11
	.19	.15	.24	.38	.27	.74	.72	.59	.72	.31	.30	.62
	17	7	4	49	28	28	30	39	39	11	89	7
20	25.64	25.85	25.88	25.73	25.58	25.20	24.85	24.47	23.86	24.67	25.14	25.27
	.18	.13	.26	.34	.30	.46	.43	.63	.74	.35	.30	.61
	19	7	4	49	28	26	29	39	39	10	89	7
30	25.65	25.87	25.92	25.77	25.73	25.48	25.42	25.02	24.61	24.95	25.18	25.36
	.17	.11	.27	.34	.35	.39	.41	.63	.71	.31	.29	.80
	19	7	4	49	28	26	29	37	39	10	88	7
50	25.71	25.90	25.94	25.95	26.03	25.91	25.84	25.46	25.28	25.50	25.54	25.69
	.14	.08	.26	.34	.24	.22	.32	.56	.50	.45	.34	.86
	19	7	4	48	28	26	28	32	38	10	88	7
75	25.85	26.02	25.99	26.12	26.20	26.10	26.15	25.86	25.71	25.73	25.86	26.21
	.21	.13	.22	.31	.18	.16	.49	.45	.39	.44	.36	.83
	19	7	3	43	23	23	21	28	27	8	79	7
100	26.04	26.18	26.19	26.29	26.31	26.33	26.23	26.20	25.98	26.15	26.12	26.18
	.32	.18	.22	.28	.19	.28	.20	.21	.36	.26	.37	.47
	17	6	3	34	19	18	16	18	22	6	71	6
125	26.14	26.43	26.29	26.45	26.43	26.46	26.50	26.35	26.22	26.35	26.42	26.58
	.37	.20	.31	.28	.23	.20	.32	.28	.31	.32	.30	.12
	17	5	3	29	9	13	9	10	14	4	59	5
150	26.27	26.77	26.45	26.62	26.56	26.60	26.72	26.55	26.43	26.53	26.67	26.77
	.44	.28	.55	.29	.23	.21	.22	.33	.35	.33	.29	.10
	12	3	2	21	7	9	7	10	10	4	47	5
175	26.46	27.00	26.56	26.69	26.78	26.82	26.88	26.75	26.66	26.78	26.90	26.91
	.52	.07	.64	.32	.26	.17	.21	.26	.37	.31	.23	.09
	10	3	2	15	5	7	5	10	7	3	39	5
200	26.56	27.18	27.14	27.00	27.01	26.99	26.91	26.95	26.69	27.13	27.08	27.04
	.57	.01		.18	.05	.15	.46	.15	.31	.01	.21	.08
	10	2	1	8	4	7	3	9	5	3	34	5
225	27.19	27.30	27.24	27.22	27.21	27.14	26.75	27.06	26.84	27.24	27.17	27.15
	.05	.01		.07	.06	.14	.57	.16	.19		.22	.08
	4	2	1	5	3	6	2	7	3	1	30	5
250	27.27	27.38	27.33	27.29		27.20	27.23	27.21	26.83	27.34	27.24	27.24
	.08			.12		.08		.07	.46		.23	.06
	4	1	1	2		4	1	5	3	1	14	5

TEMPERATURE (DEG-CEL) FOR SUBAREA 5 - JACQUES CARTIER PASSAGE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.92	-1.31	-1.11	-.29	3.44	8.20	13.35	13.50	10.54	7.66	4.32	1.48
	.80	.56	.46	.90	1.93	2.46	2.11	2.17	2.35	1.78	1.20	.82
	49	43	8	33	153	286	182	119	152	113	146	9
10	-.87	-1.41	-1.20	-.58	1.88	5.78	10.34	11.30	9.78	7.53	4.10	1.47
	.77	.28	.44	.67	1.02	1.97	2.91	3.50	2.41	1.93	1.23	.81
	49	39	8	32	151	282	182	112	130	90	114	9
20	-.84	-1.39	-1.17	-.70	.91	3.10	4.52	6.18	7.43	7.10	4.01	1.47
	.74	.32	.42	.53	.78	1.39	2.26	3.74	2.64	2.01	1.18	.80
	52	39	8	32	151	277	181	111	130	89	114	9
30	-.69	-1.38	-1.11	-.75	.44	1.57	1.83	2.87	3.94	5.42	3.74	1.46
	.74	.34	.44	.49	.73	1.02	1.47	2.67	2.38	2.10	1.25	.79
	52	39	8	32	149	273	181	110	129	89	114	9
50	-.29	-1.26	-.88	-.86	-.26	.26	.20	.62	.90	1.67	2.17	1.48
	.82	.52	.68	.49	.63	.74	.87	1.39	.93	1.57	1.51	.80
	47	37	8	31	141	242	173	106	121	87	111	9
75	.33	-.83	-.83	-.75	-.38	-.18	-.18	.14	.33	.53	.74	.72
	.89	.96	1.04	.61	.54	.68	.66	1.02	.85	.88	1.08	.58
	37	36	7	25	131	135	149	94	73	71	106	9
100	1.04	.02	-.99	-.00	-.05	.05	.10	.33	.11	.52	.33	.66
	.96	1.38	.61	1.05	.80	.63	.79	1.09	.69	.85	.69	.30
	36	33	6	19	68	122	122	82	46	62	101	9
125	1.72	1.27	.13	.74	.73	.78	.78	1.13	.81	1.17	.50	1.35
	.96	1.44	1.00	1.38	1.08	.90	.99	1.52	.78	.88	.67	.38
	27	31	6	17	56	100	107	74	29	48	86	8
150	2.64	2.38	1.79	1.72	1.89	1.94	2.09	1.83	1.82	2.01	1.45	2.36
	1.01	1.57	.79	1.13	1.09	1.11	1.05	1.43	1.00	.77	.80	.68
	21	25	6	15	48	73	84	64	19	36	75	8
175	3.54	3.33	3.59	3.01	3.14	3.24	3.58	3.14	2.68	2.98	2.60	3.16
	.96	1.62	.61	.93	.97	.94	.82	1.18	1.26	.61	.82	.69
	19	20	3	12	43	65	73	60	12	34	73	7
200	4.31	4.31	4.06	4.01	3.99	4.12	4.48	4.01	3.46	3.86	3.67	4.08
	.88	1.46	.06	.72	1.07	.86	.50	1.09	1.07	.50	.69	.44
	19	19	2	11	33	53	62	46	9	28	65	7
225	4.85	4.65	4.45	4.68	4.65	4.71	4.98	4.43	4.35	4.54	4.43	4.73
	.84	1.39	.33	.40	.95	.62	.42	.88	.92	.57	.59	.37
	14	16	2	8	23	38	46	34	6	22	50	5
250	5.25	4.80	4.34	5.04	4.91	5.06	5.18	4.63	4.65	5.23	4.76	5.11
	.71	1.05		.33	.87	.50	.42	.78	.81	.41	.59	.17
	11	8	1	6	10	29	33	21	3	10	29	3

SALINITY FOR SUBAREA 5 - JACQUES CARTIER PASSAGE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.74	32.24	32.12	32.09	30.99	28.33	30.26	30.31	30.70	31.10	31.23	31.27
	.37	.20	.05	.43	1.01	1.52	.76	.53	.49	.24	.28	.22
	39	14	5	22	68	132	29	54	47	13	47	2
10	31.80	32.25	32.10	32.09	31.42	29.65	30.64	30.53	30.80	31.14	31.29	31.42
	.28	.20	.05	.40	.53	1.10	.59	.56	.33	.24	.22	.02
	39	13	5	22	66	130	30	48	46	13	42	2
20	31.79	32.27	32.09	32.11	31.76	31.20	31.41	31.31	31.16	31.17	31.32	31.57
	.47	.20	.04	.38	.24	.42	.41	.40	.30	.19	.21	.19
	43	14	5	22	66	129	29	47	46	12	43	2
30	31.87	32.25	32.11	32.12	31.83	31.69	31.74	31.76	31.63	31.37	31.38	31.57
	.50	.21	.08	.38	.24	.24	.42	.31	.31	.20	.23	.18
	43	13	5	22	66	129	29	47	46	12	43	2
50	31.97	32.32	32.19	32.21	31.97	32.23	32.14	32.18	32.07	31.89	31.80	31.57
	.52	.19	.24	.38	.23	.19	.19	.29	.24	.27	.36	.17
	38	13	5	21	60	95	29	44	45	13	42	2
75	32.29	32.40	32.08	32.46	32.31	32.43	32.36	32.51	32.23	32.36	32.25	32.03
	.36	.21	.01	.32	.19	.53	.29	.20	.26	.09	.39	.44
	28	10	4	17	58	26	23	38	16	7	40	2
100	32.73	32.60	32.26	32.76	32.72	32.68	32.64	32.79	32.50	32.65	32.60	32.48
	.47	.20	.14	.26	.19	.48	.51	.16	.20	.09	.25	.20
	27	12	4	12	24	21	18	30	12	7	37	2
125	33.09	32.98	32.73	32.96	33.00	32.98	33.06	33.09	32.70	33.02	32.89	32.89
	.48	.20	.27	.27	.21	.38	.31	.17	.30	.17	.24	.05
	19	8	4	10	18	18	15	26	10	7	29	2
150	33.47	33.38	33.20	33.23	33.31	33.32	33.36	33.34	33.09	33.37	33.15	33.07
	.39	.26	.31	.21	.23	.34	.37	.27	.32	.28	.34	.10
	14	7	4	8	15	13	13	25	8	6	26	2
175	33.74	33.82	33.76	33.63	33.65	33.67	33.80	33.70	33.30	33.61	33.60	33.45
	.28	.16	.09	.21	.29	.25	.31	.33	.35	.23	.22	.07
	12	6	2	7	13	10	10	20	7	4	25	2
200	34.01	34.16	34.11	34.00	33.97	34.01	34.09	34.04	33.58	33.75	33.98	33.83
	.20	.21	.01	.20	.23	.28	.25	.37	.37	.52	.13	.03
	12	6	2	6	10	9	8	14	7	4	22	2
225	34.18	34.40	34.35	34.27	34.28	34.13	34.26	34.21	33.82	34.23	34.25	34.14
	.13	.19	.14	.14	.12	.33	.35	.34	.54	.15	.12	.04
	8	5	2	5	7	4	5	12	3	3	20	2
250	34.39	34.44	34.40	34.48	34.44	34.26	34.28	34.28	33.84	34.37	34.41	34.43
	.10	.21		.12	.11	.39	.51	.29	.21		.09	
	5	3	1	4	4	4	4	8	2	1	11	1

SIGMA-T FOR SUBAREA 5 - JACQUES CARTIER PASSAGE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.53	25.95	25.84	25.79	24.70	21.97	22.88	22.76	23.43	24.17	24.83	24.98
	.29	.16	.06	.37	.96	1.39	.87	.59	.60	.35	.27	.17
	39	12	5	22	68	132	29	54	47	13	47	2
10	25.58	25.94	25.83	25.81	25.15	23.34	23.53	23.31	23.61	24.26	24.89	25.10
	.23	.17	.06	.35	.50	1.03	.72	.82	.48	.44	.24	0.00
	39	10	5	22	66	130	30	48	46	13	42	2
20	25.57	25.94	25.82	25.83	25.49	24.90	24.83	24.64	24.27	24.28	24.92	25.23
	.38	.17	.05	.33	.21	.38	.59	.68	.55	.37	.23	.17
	43	10	5	22	66	129	29	47	46	12	43	2
30	25.62	25.94	25.84	25.84	25.57	25.39	25.32	25.38	25.11	24.60	24.98	25.23
	.40	.18	.07	.32	.20	.21	.56	.49	.51	.33	.25	.16
	43	10	5	22	66	129	29	47	46	12	43	2
50	25.69	25.98	25.89	25.92	25.71	25.88	25.79	25.83	25.72	25.45	25.40	25.23
	.41	.18	.18	.31	.19	.15	.20	.29	.21	.37	.36	.15
	38	9	5	21	60	94	29	44	45	13	42	2
75	25.93	26.08	25.82	26.11	25.99	26.08	26.01	26.13	25.89	25.98	25.86	25.66
	.27	.16	.02	.26	.15	.43	.24	.18	.22	.08	.36	.40
	28	9	4	17	58	26	23	38	16	7	40	2
100	26.24	26.20	25.95	26.32	26.28	26.27	26.21	26.35	26.09	26.21	26.17	26.05
	.33	.15	.10	.20	.14	.37	.39	.15	.15	.09	.21	.18
	27	9	4	12	24	21	18	30	12	7	37	2
125	26.49	26.47	26.25	26.45	26.47	26.46	26.49	26.51	26.22	26.46	26.40	26.34
	.33	.12	.17	.16	.13	.27	.19	.24	.26	.13	.19	.08
	19	8	4	10	18	18	15	26	10	7	29	2
150	26.73	26.72	26.55	26.62	26.65	26.66	26.68	26.70	26.51	26.67	26.56	26.48
	.24	.16	.21	.12	.13	.21	.21	.15	.24	.15	.26	.08
	14	7	4	8	15	13	13	24	8	6	26	2
175	26.88	26.97	26.89	26.84	26.82	26.86	26.93	26.89	26.61	26.78	26.83	26.73
	.15	.09	.05	.11	.16	.15	.17	.19	.26	.18	.15	.06
	12	6	2	7	13	10	10	20	6	4	25	2
200	27.03	27.14	27.10	27.02	27.01	27.05	27.08	27.08	26.75	26.83	27.03	26.93
	.10	.11	.02	.10	.10	.15	.16	.19	.26	.42	.09	.05
	12	6	2	6	10	9	8	14	6	4	22	2
225	27.12	27.28	27.25	27.17	27.16	27.10	27.19	27.18	26.91	27.18	27.17	27.10
	.08	.11	.08	.08	.08	.19	.22	.19	.39	.05	.06	.04
	8	5	2	5	7	4	5	12	3	3	20	2
250	27.24	27.32	27.30	27.29	27.27	27.19	27.19	27.22	26.87	27.27	27.28	27.22
	.06	.13		.07	.08	.26	.34	.17	.22		.05	
	5	3	1	4	4	4	4	8	2	1	11	1

TEMPERATURE (DEG-CEL) FOR SUBAREA 6 - NORTHWEST GULF

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-1.29	-1.34	-1.17	-.46	2.43	8.11	12.66	14.58	9.20	6.14	2.74	1.88
	.57	.47	.40	.70	1.54	2.59	2.89	2.58	2.09	1.82	1.33	.85
	40	55	9	144	215	221	138	499	158	162	252	24
10	-1.34	-1.45	-.90	-.56	1.84	5.85	8.39	10.58	8.22	5.94	2.70	1.87
	.47	.26	1.03	.77	1.31	2.37	3.49	3.88	2.56	1.87	1.27	.87
	39	54	9	143	201	217	138	496	159	156	252	25
20	-1.26	-1.41	-1.27	-.73	.94	2.64	3.09	3.79	5.09	5.26	2.70	1.89
	.47	.26	.31	.59	.90	1.65	2.23	2.37	3.20	1.88	1.29	.90
	39	54	9	143	195	216	137	493	158	156	252	25
30	-.96	-1.27	-1.23	-.92	.34	1.17	1.15	1.93	2.42	3.88	2.44	1.93
	.56	.53	.38	.43	.72	1.24	1.43	1.53	2.46	1.98	1.31	.98
	39	54	9	143	191	214	136	492	158	155	252	25
50	-.04	-.61	-.79	-.94	.10	.31	.13	.64	.75	1.80	1.55	1.63
	.70	1.25	.67	.53	.67	.79	.87	.98	1.10	1.47	1.31	1.03
	39	52	8	142	189	199	131	413	154	150	248	24
75	1.00	.62	.18	-.20	.52	.37	.25	.39	.63	.90	1.10	1.32
	.82	1.67	.98	.92	.91	.84	.83	.89	.79	.68	.98	.79
	34	48	7	137	179	185	117	351	141	127	238	23
100	1.67	1.68	1.38	.84	1.16	.91	.90	.96	1.14	1.12	1.22	1.61
	.81	1.72	.51	1.21	1.09	1.00	.89	1.03	.93	.87	.81	.56
	29	44	7	127	172	169	103	333	128	107	217	22
125	2.48	2.71	2.07	2.07	2.01	1.82	1.72	1.89	2.01	2.05	1.76	2.33
	.95	1.54	.34	1.10	1.06	1.02	.86	1.00	1.00	.98	.88	.56
	23	39	7	114	161	142	88	311	108	89	178	18
150	3.13	3.56	2.69	3.10	2.86	2.76	2.68	2.90	2.76	2.99	2.58	3.16
	1.06	1.43	.41	.85	.90	.91	.67	.75	1.01	1.07	.77	.63
	19	33	7	106	151	109	59	286	79	78	145	13
175	3.62	4.19	3.27	3.86	3.61	3.49	3.38	3.81	3.47	3.80	3.31	3.67
	.78	1.17	.50	.62	.75	.77	.50	.57	.85	.95	.54	.46
	13	25	7	93	133	84	53	249	63	64	125	12
200	4.09	4.78	3.80	4.28	4.12	4.04	3.91	4.33	3.94	4.38	3.82	4.30
	.70	.94	.54	.47	.74	.65	.46	.47	.74	.81	.59	.31
	11	23	7	89	113	75	48	232	54	53	115	10
225	4.31	4.96	4.20	4.53	4.54	4.37	4.30	4.51	4.24	4.78	4.26	4.69
	.67	.90	.58	.38	.75	.63	.47	.42	.63	.69	.46	.36
	10	19	7	84	90	64	43	139	42	40	101	10
250	4.43	5.27	4.37	4.75	4.63	4.57	4.51	4.68	4.50	4.98	4.57	4.96
	.60	.71	.59	.30	.86	.62	.48	.51	.53	.57	.42	.39
	9	15	6	69	32	52	35	116	39	35	82	9

TEMPERATURE (DEG-CEL) FOR SUBAREA 6 - NORTHWEST GULF

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	4.92	5.83	4.08	4.87	5.09	4.79	4.57	4.93	4.80	4.76	4.81	5.44
	.58	.35		.27	.46	.65	.20	.25	.33	.27	.33	.13
	4	3	1	23	16	28	9	53	25	8	25	3

SALINITY FOR SUBAREA 6 - NORTHWEST GULF

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.74	31.92	31.29	31.37	30.02	29.52	28.73	29.07	30.10	30.68	31.09	31.31
	.31	.65	.75	1.09	1.97	1.98	1.56	.82	1.11	.64	.56	.47
	38	13	6	36	69	83	56	181	87	50	141	17
10	31.74	31.99	31.39	31.55	30.42	30.40	29.74	29.77	30.32	30.87	31.13	31.36
	.30	.59	.46	.96	1.34	.76	1.39	.72	.90	.64	.51	.43
	37	12	6	36	56	80	57	180	88	44	142	18
20	31.79	31.98	31.48	31.70	31.13	31.33	31.04	31.26	31.00	31.18	31.28	31.41
	.27	.55	.47	.82	1.01	.64	.82	.65	.79	.54	.46	.43
	37	13	6	36	50	80	56	178	88	44	142	18
30	31.91	32.02	31.67	31.87	31.73	31.76	31.65	31.73	31.57	31.53	31.58	31.60
	.27	.48	.25	.75	.43	.55	.48	.41	.68	.54	.46	.51
	37	11	6	37	46	80	56	177	88	44	142	18
50	32.28	31.95	32.07	32.32	32.13	32.26	32.16	32.16	32.16	32.09	32.18	32.04
	.32	.90	.28	.73	.39	.45	.25	.42	.45	.33	.47	.53
	37	14	5	37	46	75	55	101	86	42	140	17
75	32.79	32.50	32.58	32.68	32.51	32.61	32.55	32.62	32.56	32.51	32.63	32.47
	.43	.31	.41	.83	.40	.43	.30	.37	.41	.32	.39	.51
	32	11	5	34	41	74	49	54	81	35	134	17
100	33.14	32.91	33.00	33.07	32.85	32.94	32.95	33.00	32.93	32.77	32.96	32.79
	.40	.27	.39	.80	.46	.45	.34	.34	.43	.22	.34	.46
	27	12	5	32	39	68	44	49	71	33	120	17
125	33.51	33.33	33.36	33.49	33.20	33.29	33.29	33.36	33.29	33.10	33.32	33.29
	.40	.27	.25	.71	.44	.42	.33	.31	.40	.22	.29	.46
	21	11	5	28	36	61	38	44	68	29	98	14
150	33.78	33.64	33.62	33.83	33.55	33.63	33.59	33.65	33.62	33.39	33.61	33.74
	.42	.33	.22	.65	.40	.36	.36	.28	.40	.29	.28	.23
	17	9	5	26	34	52	33	42	64	29	90	13
175	34.02	34.05	33.87	34.10	33.87	33.91	33.84	33.95	33.89	33.70	33.88	33.95
	.24	.16	.17	.53	.38	.29	.32	.22	.32	.22	.18	.17
	11	7	5	24	25	44	27	33	51	21	76	12
200	34.25	34.34	34.07	34.27	34.06	34.11	34.06	34.18	34.10	33.97	34.09	34.19
	.16	.10	.17	.45	.44	.26	.30	.15	.27	.17	.17	.07
	9	6	5	23	24	41	24	31	49	19	69	10
225	34.37	34.44	34.23	34.39	34.21	34.25	34.18	34.35	34.24	34.19	34.27	34.35
	.14	.08	.14	.39	.42	.25	.29	.16	.27	.13	.15	.06
	8	5	5	21	21	36	21	26	36	15	64	10
250	34.47	34.58	34.36	34.48	34.34	34.38	34.30	34.48	34.37	34.38	34.40	34.50
	.13	.06	.10	.38	.38	.23	.35	.17	.26	.12	.14	.08
	7	4	5	18	21	34	19	23	35	15	59	9

SALINITY FOR SUBAREA 6 - NORTHWEST GULF

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.63		34.47	34.67	34.60	34.54	34.58	34.68	34.57	34.54	34.58	34.68
	.08			.07	.13	.19	.16	.17	.23	.04	.11	.06
	4		1	9	11	24	9	12	25	8	25	3

SIGMA-T FOR SUBAREA 6 - NORTHWEST GULF

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.54	25.70	25.18	25.21	23.92	22.98	21.71	21.54	23.31	24.13	24.83	25.05
	.25	.52	.59	.90	1.63	1.71	1.51	.90	.96	.57	.49	.41
	38	13	6	36	69	83	56	181	87	50	141	17
10	25.55	25.75	25.23	25.36	24.30	23.94	23.12	22.58	23.58	24.32	24.86	25.09
	.24	.48	.35	.79	1.12	.77	1.47	.91	.89	.55	.46	.38
	37	12	6	36	56	80	57	180	88	44	142	18
20	25.59	25.74	25.34	25.49	24.95	25.03	24.73	24.82	24.46	24.66	24.98	25.12
	.22	.46	.38	.67	.85	.60	.83	.67	.87	.54	.43	.38
	37	12	6	36	50	80	56	178	88	44	142	18
30	25.67	25.78	25.49	25.63	25.49	25.48	25.39	25.39	25.20	25.07	25.24	25.28
	.21	.38	.20	.61	.37	.48	.43	.41	.72	.55	.43	.45
	37	11	6	37	46	80	56	177	88	44	142	18
50	25.93	25.69	25.79	25.99	25.83	25.91	25.84	25.79	25.80	25.70	25.78	25.64
	.23	.75	.21	.58	.32	.35	.20	.37	.38	.33	.44	.49
	37	13	5	37	46	75	55	101	86	42	140	17
75	26.29	26.12	26.16	26.22	26.11	26.17	26.14	26.17	26.12	26.09	26.16	26.00
	.30	.25	.30	.63	.30	.30	.22	.30	.31	.25	.34	.45
	32	11	5	34	41	74	49	54	81	35	134	17
100	26.52	26.41	26.44	26.47	26.34	26.40	26.42	26.45	26.38	26.30	26.42	26.24
	.27	.18	.27	.59	.30	.30	.23	.24	.29	.17	.25	.38
	27	11	5	32	39	68	44	49	71	33	120	17
125	26.75	26.67	26.68	26.72	26.56	26.62	26.63	26.68	26.61	26.51	26.65	26.60
	.24	.16	.18	.51	.27	.27	.22	.21	.25	.15	.19	.35
	21	11	5	28	36	61	38	44	68	29	98	14
150	26.91	26.85	26.84	26.91	26.78	26.83	26.81	26.87	26.82	26.69	26.83	26.89
	.24	.18	.15	.49	.23	.22	.24	.19	.25	.19	.17	.13
	17	9	5	26	34	52	33	42	64	29	90	13
175	27.06	27.07	26.99	27.06	26.96	26.99	26.96	27.03	26.97	26.87	26.98	27.01
	.12	.09	.10	.40	.22	.18	.22	.14	.19	.13	.11	.09
	11	7	5	24	25	44	27	33	51	21	76	12
200	27.19	27.24	27.11	27.15	27.06	27.11	27.09	27.17	27.09	27.03	27.10	27.13
	.06	.07	.10	.35	.27	.16	.20	.10	.16	.09	.10	.04
	9	6	5	23	24	41	24	31	49	19	69	10
225	27.26	27.30	27.20	27.23	27.15	27.19	27.15	27.28	27.18	27.15	27.20	27.22
	.05	.06	.07	.31	.26	.15	.20	.11	.17	.08	.09	.03
	8	5	5	21	21	36	21	26	36	15	64	10
250	27.33	27.39	27.28	27.28	27.23	27.26	27.22	27.37	27.26	27.26	27.28	27.30
	.05	.07	.04	.31	.23	.14	.25	.14	.18	.08	.09	.04
	7	4	5	18	21	34	19	23	35	15	59	9

SIGMA-T FOR SUBAREA 6 - NORTHWEST GULF

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.41		27.38	27.42	27.38	27.36	27.42	27.48	27.38	27.36	27.38	27.39
	.05			.04	.08	.13	.11	.12	.17	.05	.08	.03
	4		1	9	10	24	9	12	25	8	25	3

TEMPERATURE (DEG-CEL) FOR SUBAREA 7 - ESTUARY

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-1.00	-.98	.11	.56	3.99	7.86	8.44	7.98	6.84	3.88	1.32	1.64
	.59	.39	.62	.80	1.77	2.76	2.95	2.36	2.35	.97	.95	.88
	19	59	35	179	134	302	789	510	305	186	111	46
10	-.60	-.58	-.00	.34	2.61	5.05	5.42	6.59	4.96	3.46	1.40	1.84
	.85	.62	.48	.69	1.35	2.13	2.03	2.07	1.51	.77	.78	.90
	19	58	34	180	123	285	756	437	323	183	107	45
20	-.02	-.25	-.00	.02	1.59	2.98	3.52	5.10	3.96	3.15	1.55	2.06
	.94	.62	.61	.74	1.16	1.51	1.63	1.87	1.48	.79	.70	.97
	19	57	34	174	116	286	729	416	324	172	102	45
30	.31	-.10	-.26	-.25	.99	1.81	2.23	3.36	2.93	2.63	1.55	2.14
	.84	.69	.64	.80	1.05	1.11	1.51	1.59	1.47	1.05	.69	.95
	19	56	33	164	108	272	714	400	280	135	97	45
50	.99	.25	-.58	-.37	.20	.61	.57	1.30	1.43	1.64	1.34	2.04
	.66	.82	.64	.95	.85	.93	.94	1.24	1.22	1.10	.67	.80
	19	39	33	157	102	246	642	187	267	131	97	45
75	1.68	1.14	.21	-.09	-.15	.21	.24	.94	.92	.89	1.39	1.73
	.73	.88	1.05	1.19	.82	.78	.76	.89	.72	.83	.59	.49
	19	37	32	137	85	229	517	169	227	120	89	45
100	2.33	2.18	1.82	.69	.44	.96	.76	1.49	1.52	1.27	1.77	1.81
	.62	.79	1.13	1.50	.97	.93	.89	.94	.89	.46	.70	.40
	19	23	16	126	71	181	448	117	174	92	86	33
125	2.81	2.88	2.86	1.64	1.24	1.79	1.50	2.35	2.34	2.01	2.27	2.35
	.80	.80	1.09	1.55	1.10	.95	.81	.98	.97	.56	.80	.54
	19	17	13	121	48	125	359	82	129	75	82	24
150	3.25	3.61	3.46	2.62	2.25	2.54	2.28	3.02	3.09	2.65	2.71	2.82
	.86	.73	.84	1.34	.91	.86	.73	.83	.89	.50	.81	.59
	19	13	9	100	42	95	317	74	119	70	58	21
175	3.63	4.15	3.97	3.38	3.03	3.13	2.96	3.54	3.58	3.12	3.18	3.33
	.80	.56	.61	.99	.65	.80	.66	.74	.85	.53	.74	.59
	19	12	9	90	42	89	262	61	116	68	55	18
200	3.92	4.49	4.35	3.83	3.55	3.61	3.46	3.87	4.05	3.53	3.61	3.86
	.69	.46	.57	.79	.60	.79	.62	.68	.74	.59	.65	.54
	19	12	9	85	40	84	225	54	101	70	51	15
250	4.41	5.08	4.77	4.44	4.28	4.23	4.23	4.47	4.48	4.04	4.13	4.75
	.51	.35	.68	.54	.39	.77	.63	.67	.72	.45	.34	.21
	18	8	9	72	24	65	158	34	55	56	31	14
300	4.68		3.86	4.74	4.48	4.23	4.19	4.16	4.39	4.25	4.41	5.13
	.26			.39	.23	.42	.60	.30	.41	.13	.31	.22
	11		1	34	9	29	59	9	37	40	9	5

SALINITY FOR SUBAREA 7 - ESTUARY

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	30.12	28.15	28.91	26.98	23.77	25.09	26.48	27.79	28.54	27.81	28.94	30.10
	.72	1.40		2.93	2.56	1.94	1.83	1.36	1.22	1.13	1.21	.84
	18	13	1	172	77	180	558	301	196	109	73	10
10	30.61	28.59	28.87	28.45	25.67	26.73	28.08	28.44	29.30	28.32	30.02	30.47
	.70	1.06		1.97	1.98	1.65	1.29	.94	.99	1.02	1.13	.95
	18	14	1	173	72	170	540	305	218	109	66	10
20	31.24	29.76	28.88	30.07	28.38	28.54	29.42	29.17	29.92	29.14	31.00	30.86
	.86	.59		1.33	1.69	1.47	1.09	.82	1.04	1.10	.94	1.08
	18	14	1	170	67	171	513	285	220	100	61	10
30	31.76	30.36	29.37	31.17	30.20	29.98	30.49	30.25	30.77	30.65	31.70	31.22
	.95	.54		1.03	1.28	1.21	.98	.89	.95	.64	.60	1.09
	18	14	1	161	60	162	499	274	184	65	57	10
50	32.37	31.23	30.93	32.29	31.74	31.56	31.90	31.86	31.89	31.84	32.46	31.94
	.90	.70		.62	.63	.85	.67	.59	.62	.28	.34	.94
	18	6	1	157	59	147	434	65	166	61	57	10
75	32.87	32.54	32.22	32.81	32.49	32.38	32.44	32.44	32.61	32.71	32.96	32.69
	.74	.10		.39	.43	.76	.53	.56	.60	.18	.36	.56
	18	5	1	137	44	134	329	56	135	59	52	10
100	33.20	33.10	32.66	33.12	32.85	32.95	32.89	32.93	33.15	33.19	33.26	33.21
	.65	.20		.41	.34	.38	.47	.53	.39	.21	.37	.23
	18	5	1	126	39	117	295	50	128	58	52	9
125	33.55	33.35	33.09	33.43	33.19	33.35	33.23	33.43	33.50	33.52	33.50	33.49
	.47	.17		.39	.26	.31	.41	.44	.34	.12	.27	.18
	18	3	1	115	29	92	250	28	104	52	50	9
150	33.80	33.83	33.48	33.70	33.53	33.63	33.51	33.74	33.79	33.72	33.67	33.71
	.35	.03		.36	.22	.26	.37	.37	.24	.09	.25	.16
	18	2	1	96	26	74	224	26	98	51	36	9
175	33.98	34.04	33.76	33.94	33.76	33.88	33.75	33.95	33.97	33.87	33.82	33.89
	.27	.01		.49	.15	.21	.37	.31	.23	.07	.20	.14
	18	2	1	86	26	68	176	20	95	51	34	9
200	34.12	34.24	33.94	34.09	33.96	34.06	33.94	34.10	34.16	34.00	33.97	34.02
	.20	.00		.26	.13	.20	.36	.33	.12	.08	.17	.17
	18	2	1	81	24	67	170	20	83	53	31	6
250	34.32	34.45	34.24	34.31	34.21	34.30	34.24	34.43	34.39	34.27	34.22	34.28
	.10			.17	.12	.24	.35	.34	.09	.05	.12	.11
	17	1	1	72	19	52	124	14	49	49	27	6
300	34.42		34.38	34.41	34.40	34.42	34.32	34.52	34.44	34.40	34.41	34.44
	.08			.11	.08	.19	.35	.24	.06	.02	.06	.08
	11		1	34	9	28	58	9	36	39	9	5

SIGMA-T FOR SUBAREA 7 - ESTUARY

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	24.23	22.64	23.23	21.66	18.92	19.43	20.50	21.66	22.47	22.14	23.24	24.[illegible]4
	.58	1.14		2.36	2.13	1.66	1.73	1.07	1.13	.91	.99	.67
	18	13	1	172	77	173	542	293	193	109	66	10
10	24.60	23.03	23.20	22.84	20.55	21.07	22.13	22.34	23.23	22.56	24.10	24.43
	.55	.90		1.59	1.63	1.42	1.15	.83	.83	.82	.89	.76
	18	14	1	173	70	159	523	296	213	109	65	10
20	25.09	23.92	23.21	24.16	22.80	22.72	23.38	23.02	23.77	23.24	24.88	24.73
	.67	.48		1.08	1.37	1.26	.97	.77	.92	.90	.71	.86
	18	14	1	170	65	161	498	277	216	100	60	10
30	25.50	24.40	23.56	25.05	24.25	23.98	24.35	24.06	24.56	24.48	25.44	25.03
	.74	.44		.84	1.05	1.03	.92	.83	.85	.56	.42	.88
	18	14	1	161	60	157	483	266	174	65	56	10
50	25.95	25.10	24.88	25.95	25.51	25.36	25.60	25.54	25.55	25.48	26.04	25.60
	.69	.57		.50	.53	.63	.57	.51	.56	.29	.24	.78
	18	6	1	157	58	142	419	58	163	61	56	10
75	26.31	26.15	25.87	26.35	26.12	26.02	26.06	26.02	26.16	26.24	26.43	26.17
	.55	.05		.27	.33	.62	.43	.46	.48	.19	.19	.50
	18	5	1	137	44	129	313	52	132	59	51	10
100	26.53	26.52	26.19	26.56	26.37	26.43	26.39	26.36	26.54	26.60	26.63	26.57
	.48	.14		.26	.24	.27	.37	.40	.26	.16	.19	.15
	18	5	1	126	39	113	286	46	119	58	51	9
125	26.77	26.67	26.49	26.74	26.59	26.69	26.62	26.71	26.76	26.81	26.76	26.74
	.31	.11		.22	.17	.22	.31	.32	.22	.08	.16	.12
	18	3	1	115	29	90	247	27	102	52	50	9
150	26.93	26.96	26.76	26.90	26.78	26.87	26.79	26.92	26.94	26.93	26.86	26.87
	.20	0.00		.18	.14	.20	.29	.25	.14	.06	.15	.09
	18	2	1	96	26	72	222	26	98	51	36	9
175	27.03	27.09	26.94	27.02	26.92	27.01	26.93	27.06	27.03	27.01	26.95	26.98
	.14	.01		.15	.08	.17	.28	.22	.16	.04	.11	.09
	18	2	1	86	26	67	176	20	95	51	34	9
200	27.11	27.20	27.07	27.10	27.03	27.11	27.03	27.15	27.14	27.09	27.04	27.03
	.10	.01		.11	.07	.16	.28	.23	.05	.05	.10	.09
	18	2	1	81	24	66	170	20	83	53	31	6
250	27.23	27.32	27.30	27.21	27.17	27.26	27.20	27.36	27.28	27.24	27.18	27.16
	.04			.08	.08	.20	.28	.27	.05	.02	.07	.06
	17	1	1	72	19	52	124	14	49	49	27	6
300	27.27		27.33	27.26	27.28	27.32	27.24	22.41	27.32	27.31	27.30	27.24
	.04			.05	.05	.16	.27	.17	.02	.01	.03	.04
	11		1	34	9	28	58	9	36	39	9	5

TEMPERATURE (DEG-CEL) FOR SUBAREA 8 - GASPE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.94	-1.35	-1.08	.06	4.08	9.20	12.32	13.77	10.39	6.70	2.80	1.92
	.69	.63	.35	.96	2.05	2.20	2.61	2.02	2.07	1.54	1.21	.94
	24	46	25	61	207	508	571	435	563	281	378	35
10	-.98	-1.41	-1.19	-.13	2.84	7.27	9.22	11.14	9.69	6.38	2.69	2.15
	.52	.51	.27	.87	1.69	2.28	2.98	3.04	2.24	1.78	1.14	.88
	15	41	24	58	177	442	557	405	520	254	359	35
20	-1.06	-1.41	-1.24	-.36	1.33	4.36	5.36	6.30	7.94	5.88	2.75	2.33
	.65	.50	.24	.73	1.27	2.30	3.14	3.83	2.99	1.95	1.10	.91
	16	41	24	59	165	442	552	405	518	253	359	35
30	-.87	-1.36	-1.08	-.57	.60	2.50	3.24	3.55	5.06	4.86	2.71	2.59
	.65	.52	.35	.68	1.00	2.12	2.69	3.27	3.27	2.26	1.13	.87
	16	41	24	58	165	436	547	403	505	254	357	35
50	-.23	-.83	-.87	-.80	.05	.50	.96	.86	1.52	2.63	2.14	2.63
	.98	.91	.50	.64	.72	1.42	1.55	1.72	2.01	2.20	1.32	.89
	16	41	24	54	162	419	501	381	477	238	340	33
75	.54	.59	.70	-.40	.15	.16	.08	.31	.44	.96	1.30	1.75
	1.06	1.67	1.35	.98	.99	.86	.93	.76	1.01	1.20	1.05	.64
	16	40	24	52	149	388	444	351	433	219	314	32
100	1.23	1.29	1.91	.75	.97	.91	.47	.75	.75	.84	1.11	1.31
	.83	1.81	1.53	1.23	1.17	1.05	1.07	.88	.93	.84	.74	.38
	16	40	23	49	131	363	359	336	400	193	306	30
125	1.83	2.09	2.72	1.84	1.83	1.80	1.30	1.52	1.49	1.58	1.41	1.82
	.93	1.86	1.84	1.19	1.21	1.00	1.10	.98	1.05	.92	.92	.47
	15	36	23	46	112	307	302	293	342	157	279	29
150	2.37	2.99	3.23	3.17	2.72	2.65	2.37	2.67	2.55	2.62	2.11	2.59
	.97	1.63	1.88	.77	1.10	.96	1.10	.79	1.11	.87	1.06	.33
	15	34	22	41	95	250	231	206	238	117	232	24
175	3.13	3.97	3.80	3.97	3.38	3.34	3.27	3.46	3.35	3.36	2.84	3.43
	.86	1.22	1.50	.52	.81	.78	.98	.69	.98	.86	.91	.26
	13	30	22	36	76	229	218	195	209	107	200	23
200	3.69	4.57	4.41	4.42	3.89	3.95	3.94	4.01	3.95	3.93	3.51	4.07
	.89	1.00	1.06	.43	.64	.69	.91	.58	.83	.85	.71	.27
	13	30	20	32	66	182	180	182	188	96	170	23
225	3.97	4.95	4.81	4.75	4.33	4.38	4.43	4.44	4.29	4.48	4.02	4.55
	.78	.95	.78	.37	.55	.63	.88	.61	.58	.83	.56	.18
	12	27	18	27	48	148	144	139	108	67	139	21
250	4.43	5.22	4.91	4.94	4.50	4.68	4.73	4.75	4.60	4.69	4.48	4.93
	.66	.96	.70	.31	.49	.64	.95	.56	.47	.77	.41	.19
	8	24	15	23	35	119	115	124	84	46	81	20

TEMPERATURE (DEG-CEL) FOR SUBAREA 8 - GASPE

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	4.74	6.01	4.09	5.10	4.66	4.85	4.67	4.62	4.81	4.09	4.77	5.27
	.75	1.02	.27	.27	.66	.51	.18	.82	.37	.93	.33	.11
	3	4	3	14	23	50	31	39	29	7	41	5

SALINITY FOR SUBAREA 8 - GASPE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	30.86	31.11	30.63	30.39	27.86	27.31	27.42	28.39	29.14	29.59	30.22	30.09
	.80	.77	.92	1.98	2.67	2.03	1.78	.90	1.19	.81	1.05	1.78
	17	12	6	49	133	273	223	113	209	46	158	14
10	30.40	31.17	31.04	30.66	28.46	28.16	28.52	29.01	29.32	29.77	30.29	30.57
	.80	.99	.49	1.61	2.48	1.85	1.58	1.02	1.08	.79	.95	1.16
	8	8	5	46	104	206	208	86	168	38	148	14
20	30.79	31.22	31.18	31.29	30.10	29.74	29.56	30.09	29.89	30.13	30.59	30.75
	.96	.92	.38	.95	1.84	1.52	1.40	1.23	1.09	.89	.83	1.10
	9	8	5	47	92	206	207	86	168	38	148	14
30	31.05	31.62	31.30	31.72	30.84	30.93	30.35	30.94	30.66	30.60	30.95	31.07
	.90	.63	.35	.74	1.63	1.11	1.16	.97	1.10	1.08	.69	.83
	9	8	5	46	92	204	203	86	164	39	147	14
50	31.85	31.86	31.80	32.26	31.70	31.99	31.50	31.97	31.80	31.51	31.72	31.62
	.70	.55	.36	.46	1.43	.64	.73	.45	.70	.89	.70	.59
	9	8	5	44	90	196	181	79	156	34	133	13
75	32.44	32.27	32.21	32.64	32.44	32.50	32.17	32.46	32.41	32.30	32.40	32.23
	.68	.58	.49	.41	.40	.44	.36	.32	.58	.57	.55	.56
	9	8	5	42	81	182	164	70	147	31	126	13
100	32.87	32.66	32.67	33.05	32.91	32.96	32.68	32.89	32.86	32.80	32.86	32.81
	.62	.58	.58	.44	.40	.48	.30	.31	.42	.47	.46	.31
	9	7	5	40	72	170	107	68	139	20	120	11
125	33.25	32.97	32.97	33.41	33.30	33.38	33.09	33.24	33.23	33.08	33.21	33.16
	.51	.73	.68	.40	.36	.49	.31	.48	.44	.51	.42	.27
	8	6	5	38	70	147	90	57	126	18	113	11
150	33.52	33.28	33.24	33.80	33.65	33.71	33.47	33.52	33.56	33.28	33.52	33.52
	.40	.78	.69	.28	.33	.47	.25	.75	.43	.56	.37	.19
	8	6	5	35	61	131	76	49	119	18	109	11
175	33.80	33.70	33.59	34.05	33.85	33.95	33.74	33.82	33.83	33.45	33.80	33.82
	.33	.79	.52	.25	.25	.46	.37	.45	.38	.60	.29	.12
	8	5	5	32	48	124	68	47	103	13	97	10
200	34.10	33.93	33.82	34.23	34.02	34.14	34.03	34.09	34.05	33.75	34.04	34.04
	.30	.72	.35	.18	.31	.49	.21	.34	.28	.45	.22	.13
	7	5	4	28	42	105	52	45	97	11	84	10
225	34.21	34.20	34.12	34.39	34.22	34.26	34.16	34.23	34.17	33.90	34.24	34.26
	.22	.48	.10	.16	.17	.23	.55	.30	.19	.43	.17	.07
	6	5	3	24	29	85	48	35	59	12	68	8
250	34.41	34.54	34.24	34.45	34.35	34.39	34.36	34.38	34.32	34.09	34.40	34.40
	.17	.09	.09	.09	.15	.21	.29	.30	.18	.45	.14	.06
	4	4	3	21	28	80	46	34	49	11	59	7

SALINITY FOR SUBAREA 8 - GASPE

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.58	34.66	34.40	34.58	34.52	34.56	34.59	34.63	34.55	34.47	34.58	34.59
	.15	.04	.01	.05	.14	.21	.09	.23	.20	.13	.08	.05
	3	2	3	14	21	46	29	22	29	6	41	5

SIGMA-T FOR SUBAREA 8 - GASPE

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	24.83	25.10	24.64	24.41	22.13	21.05	20.82	21.25	22.45	23.28	24.11	24.11
	.65	.62	.74	1.61	2.19	1.65	1.54	.81	1.00	.66	.77	1.40
	17	11	6	49	133	273	222	113	209	46	147	14
10	24.46	25.19	24.98	24.64	22.72	21.97	22.09	22.09	22.70	23.48	24.21	24.47
	.65	.82	.39	1.32	2.03	1.53	1.38	1.02	.95	.63	.74	.90
	8	7	5	46	104	206	208	86	168	38	148	14
20	24.77	25.19	25.09	25.16	24.15	23.58	23.31	23.57	23.33	23.79	24.44	24.61
	.78	.78	.30	.78	1.52	1.36	1.31	1.30	1.10	.74	.66	.87
	9	7	5	47	92	206	207	86	168	38	148	14
30	24.98	25.40	25.19	25.52	24.77	24.70	24.16	24.59	24.20	24.23	24.73	24.85
	.72	.52	.27	.62	1.34	1.03	1.11	1.02	1.16	.95	.57	.66
	9	7	5	46	92	204	203	86	164	39	147	14
50	25.58	25.57	25.59	25.95	25.47	25.68	25.26	25.64	25.44	25.13	25.39	25.28
	.52	.41	.28	.37	1.15	.58	.63	.47	.69	.87	.62	.50
	9	7	5	44	90	196	181	79	156	34	133	13
75	26.01	25.85	25.90	26.23	26.07	26.11	25.85	26.08	26.01	25.85	25.97	25.79
	.49	.40	.38	.29	.29	.34	.31	.26	.48	.55	.49	.50
	9	7	5	42	81	182	164	70	147	31	126	13
100	26.32	26.20	26.21	26.50	26.40	26.41	26.25	26.38	26.34	26.30	26.33	26.29
	.44	.40	.42	.28	.27	.32	.22	.22	.29	.41	.36	.22
	9	7	5	40	72	170	107	68	139	20	120	11
125	26.59	26.39	26.43	26.72	26.64	26.67	26.52	26.62	26.58	26.49	26.57	26.53
	.33	.51	.49	.23	.23	.35	.22	.32	.28	.43	.29	.18
	8	6	5	38	70	147	90	57	126	18	113	11
150	26.77	26.57	26.59	26.93	26.84	26.88	26.77	26.76	26.78	26.59	26.77	26.76
	.23	.53	.48	.16	.20	.34	.17	.59	.26	.44	.23	.11
	8	6	5	35	61	131	76	49	119	18	109	11
175	26.94	26.81	26.81	27.05	26.96	27.01	26.91	26.95	26.93	26.70	26.94	26.94
	.17	.56	.36	.15	.15	.34	.22	.33	.22	.42	.16	.07
	8	5	5	32	48	124	68	47	103	13	97	10
200	27.11	26.95	26.95	27.15	27.04	27.12	27.08	27.11	27.05	26.90	27.07	27.06
	.14	.52	.23	.11	.22	.36	.12	.26	.15	.27	.12	.07
	7	5	4	28	42	105	52	45	97	11	84	10
225	27.18	27.11	27.14	27.24	27.16	27.18	27.14	27.20	27.12	26.99	27.19	27.17
	.09	.35	.06	.10	.10	.13	.39	.21	.11	.27	.06	.05
	6	5	3	24	29	85	48	35	59	12	68	8
250	27.30	27.35	27.22	27.27	27.24	27.26	27.27	27.30	27.21	27.10	27.28	27.24
	.05	.07	.06	.05	.09	.12	.18	.21	.10	.28	.06	.05
	4	4	3	21	28	80	46	34	49	11	59	7

SIGMA-T FOR SUBAREA 8 - GASPE

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.39	27.40	27.32	27.35	27.36	27.37	27.41	27.47	27.36	27.35	27.39	27.34
	.04	.03	.03	.05	.18	.15	.07	.17	.14	.07	.06	.03
	3	2	3	14	21	46	29	22	29	6	41	5

TEMPERATURE (DEG-CEL) FOR SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.64	-1.29	-1.30	-1.01	2.75	7.61	10.87	13.48	11.23	6.53	3.94	2.73
	1.15	.54	.31	.82	1.16	2.39	3.16	2.95	2.18	1.49	1.28	1.10
	8	32	9	46	68	92	81	116	93	68	217	15
10	-.65	-1.48	-1.39	-1.12	2.06	5.96	7.81	11.71	10.51	6.35	3.81	2.78
	1.12	.29	.27	.68	1.08	1.79	2.70	3.14	2.49	1.60	1.24	1.05
	8	32	9	45	53	85	76	105	93	62	199	15
20	-.50	-1.47	-1.40	-1.16	1.38	3.51	4.63	6.66	6.68	5.73	3.76	2.87
	1.09	.28	.27	.63	1.10	1.73	2.79	3.58	3.92	1.62	1.26	.97
	8	32	9	45	53	85	77	105	93	61	201	15
30	-.43	-1.44	-1.39	-1.22	.82	1.86	2.47	3.10	3.61	4.61	3.64	2.96
	1.06	.29	.30	.56	1.04	1.51	2.02	2.01	2.94	1.93	1.27	.97
	8	32	9	45	53	83	75	103	91	59	202	15
50	-.26	-1.36	-1.31	-1.27	.01	.62	.22	.73	.67	1.42	2.18	2.11
	1.08	.32	.33	.52	1.16	1.09	.83	.92	1.29	1.26	1.38	.99
	9	31	9	44	53	72	72	99	88	55	199	15
75	.54	-1.10	-1.12	-1.00	-.14	-.38	-.19	.34	-.02	.63	.66	.84
	.78	.59	.47	.67	.79	.92	.62	.78	.57	.73	.76	.35
	9	29	9	42	51	66	68	89	81	52	191	15
100	1.19	-.21	.05	.44	.52	.19	.12	.64	.13	.98	.63	1.12
	.63	1.08	.69	.86	.91	1.08	.69	.94	.62	.65	.75	.44
	9	29	9	40	50	62	48	80	68	41	188	15
125	1.95	1.10	1.00	1.76	1.52	1.04	1.02	1.24	.75	1.85	1.16	1.84
	.46	1.16	.76	.82	.93	.92	.73	1.05	.86	.62	.90	.62
	9	22	9	37	48	56	45	77	62	30	173	15
150	2.64	2.20	1.92	2.92	2.54	2.17	2.13	2.05	1.56	2.89	2.01	2.71
	.68	1.23	.78	.77	.87	1.09	.77	1.04	1.10	.74	1.01	.75
	9	22	9	35	45	47	41	69	35	20	160	12
175	3.56	3.26	2.91	3.86	3.33	3.14	3.16	3.07	2.77	4.04	2.99	3.80
	.90	1.21	.83	.56	.99	1.05	.73	.80	1.12	.53	.91	.74
	8	21	9	30	40	43	39	64	34	18	149	9
200	4.29	4.14	3.77	4.46	4.14	3.91	3.99	3.91	3.61	4.75	3.86	4.58
	.95	1.16	.77	.50	.98	.95	.46	.58	1.18	.53	.82	.72
	8	20	9	27	34	43	36	58	28	14	132	9
225	4.84	4.80	4.41	4.85	4.53	4.52	4.51	4.48	4.34	5.25	4.43	5.12
	.77	1.05	.74	.38	1.06	.89	.39	.44	.99	.59	.65	.56
	7	18	8	26	31	33	35	49	23	12	124	9
250	5.13	4.93	4.71	5.10	4.79	4.87	4.69	4.82	4.80	5.46	4.81	5.49
	.60	.99	.83	.27	1.11	.77	.20	.39	.94	.61	.59	.38
	6	15	5	21	22	32	22	43	18	9	86	8

TEMPERATURE (DEG-CEL) FOR SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	5.01	5.57	4.86	5.11	4.83	5.15	4.67	4.86	5.27	4.80	4.91	5.47
	.58	.52	.49	.25	.35	.74	.10	.34	.64	.05	.52	.15
	5	7	4	10	7	17	6	15	7	2	58	7

SALINITY FOR SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.31	31.83	31.92	31.81	30.86	29.78	29.95	29.95	30.48	31.00	31.17	31.17
	.80	.44	.33	.44	.95	1.70	.93	.62	.62	.27	.57	.60
	6	7	6	34	25	36	28	38	15	7	95	14
10	31.34	31.84	31.88	31.83	30.67	30.42	30.14	30.13	30.50	31.01	31.19	31.24
	.75	.41	.31	.41	.90	.90	.73	.44	.72	.31	.52	.45
	6	7	6	34	13	29	23	27	15	8	95	14
20	31.55	31.85	31.90	31.87	31.14	31.00	31.07	31.00	31.02	31.25	31.27	31.30
	.43	.38	.28	.40	.62	.73	.60	.55	.70	.30	.42	.40
	6	7	6	34	13	29	24	27	15	7	97	14
30	31.66	31.86	31.91	31.94	31.54	31.46	31.63	31.64	31.56	31.60	31.36	31.38
	.34	.36	.25	.37	.41	.55	.43	.52	.43	.45	.39	.37
	6	7	6	34	13	28	23	26	14	7	98	14
50	31.84	31.88	31.97	32.10	32.06	31.99	32.08	32.02	32.09	32.26	31.85	31.80
	.21	.36	.19	.40	.15	.24	.19	.62	.31	.39	.46	.30
	7	6	6	34	13	24	23	26	14	7	97	14
75	32.22	32.05	32.05	32.38	32.38	32.30	32.33	32.51	32.39	32.57	32.46	32.47
	.29	.27	.13	.33	.25	.23	.32	.35	.27	.33	.41	.14
	7	6	6	34	12	21	22	22	14	6	94	14
100	32.74	32.41	32.47	32.92	32.89	32.68	32.73	32.78	32.53	32.56	32.83	32.85
	.32	.29	.27	.23	.29	.29	.18	.45	.22	.14	.32	.17
	7	6	6	33	12	20	11	20	10	3	93	14
125	33.16	32.79	32.90	33.37	33.11	32.99	33.13	33.11	32.77	33.09	33.16	33.21
	.17	.42	.45	.25	.25	.29	.17	.43	.25	.13	.32	.20
	7	5	6	31	12	18	11	18	9	2	85	14
150	33.44	33.19	33.30	33.71	33.43	33.34	33.50	33.43	32.93	33.46	33.47	33.52
	.18	.40	.45	.23	.25	.29	.15	.47	.38	.19	.35	.25
	7	5	6	30	12	17	11	18	9	2	78	11
175	33.73	33.62	33.70	34.00	33.63	33.68	33.87	33.81	33.42	33.76	33.80	33.88
	.23	.31	.30	.20	.26	.26	.15	.36	.39	.11	.28	.10
	6	5	6	27	12	16	10	17	9	2	70	8
200	33.99	34.03	33.97	34.23	33.96	33.97	34.14	34.18	33.76	34.06	34.08	34.16
	.26	.34	.20	.21	.23	.20	.14	.37	.46	.06	.25	.09
	6	4	6	25	9	16	10	16	9	2	69	8
225	34.27	34.43	34.20	34.40	34.16	34.22	34.31	34.35	34.01	34.21	34.30	34.37
	.17	.08	.18	.20	.19	.22	.13	.20	.42	.07	.19	.10
	5	3	5	24	8	12	10	14	8	2	66	8
250	34.42	34.58	34.42	34.54	34.31	34.37	34.42	34.50	34.19	34.43	34.46	34.50
	.10	.14	.18	.24	.15	.19	.13	.27	.37	.19	.15	.08
	4	3	5	21	8	11	10	13	8	2	64	8

SALINITY FOR SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.59	34.69	34.56	34.71	34.56	34.60	34.65	34.80	34.60	34.65	34.63	34.63
	.10	.10	.09	.29	.08	.16	.13	.22	.08	.11	.11	.06
	4	3	4	18	6	8	6	8	4	2	57	7

SIGMA-T FOR SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.16	25.63	25.70	25.60	24.65	23.15	22.92	22.29	23.18	24.33	24.80	24.86
	.60	.35	.27	.37	.76	1.58	.97	.76	.87	.31	.46	.46
	6	7	6	34	25	36	28	38	15	7	95	14
10	25.19	25.63	25.66	25.62	24.60	23.92	23.33	22.85	23.43	24.36	24.81	24.91
	.56	.33	.25	.34	.75	.83	.83	.61	1.02	.38	.42	.36
	6	7	6	34	13	29	23	27	15	8	95	14
20	25.35	25.64	25.68	25.65	25.01	24.63	24.49	24.32	24.27	24.63	24.89	24.95
	.31	.31	.23	.33	.51	.69	.71	.76	1.07	.31	.37	.33
	6	7	6	34	13	29	24	27	15	7	97	14
30	25.45	25.65	25.69	25.71	25.34	25.13	25.23	25.27	25.04	25.01	24.96	25.01
	.23	.29	.20	.30	.34	.55	.47	.51	.61	.57	.35	.31
	6	7	6	34	13	28	23	26	14	7	98	14
50	25.59	25.67	25.73	25.84	25.79	25.70	25.75	25.73	25.72	25.87	25.45	25.42
	.13	.30	.15	.33	.15	.22	.19	.51	.36	.36	.44	.30
	7	6	6	34	13	24	23	26	14	7	97	14
75	25.85	25.80	25.79	26.05	26.03	25.96	25.98	26.14	26.03	26.18	26.04	26.05
	.20	.22	.11	.26	.19	.19	.26	.27	.21	.26	.35	.12
	7	6	6	34	12	21	22	22	14	6	94	14
100	26.24	26.06	26.08	26.42	26.26	26.26	26.28	26.32	26.14	26.15	26.34	26.33
	.23	.21	.20	.17	.21	.22	.14	.34	.19	.09	.23	.12
	7	6	6	33	12	20	11	20	10	3	93	14
125	26.54	26.31	26.36	26.70	26.52	26.46	26.54	26.54	26.30	26.51	26.55	26.57
	.11	.28	.31	.17	.17	.20	.12	.33	.23	.07	.20	.12
	7	5	6	31	12	18	11	18	9	2	85	14
150	26.71	26.57	26.59	26.87	26.71	26.68	26.76	26.74	26.39	26.74	26.74	26.75
	.11	.26	.28	.15	.16	.17	.10	.38	.30	.09	.22	.14
	7	5	6	30	12	17	11	18	9	2	78	11
175	26.87	26.82	26.83	27.02	26.83	26.88	26.97	26.98	26.71	26.92	26.92	26.92
	.13	.20	.16	.14	.17	.13	.09	.28	.27	.05	.16	.05
	6	5	6	27	12	16	10	17	9	2	70	8
200	27.01	27.05	26.98	27.14	27.01	27.04	27.13	27.20	26.90	27.09	27.07	27.06
	.15	.21	.07	.15	.15	.10	.09	.30	.27	.04	.16	.04
	6	4	6	25	9	16	10	16	9	2	69	8
225	27.17	27.30	27.11	27.23	27.11	27.18	27.22	27.28	27.05	27.21	27.19	27.17
	.11	.13	.07	.15	.14	.11	.09	.16	.26	.09	.11	.05
	5	3	5	24	8	12	10	14	8	2	66	8
250	27.25	27.36	27.26	27.32	27.20	27.28	27.29	27.36	27.15	27.31	27.29	27.24
	.06	.14	.07	.18	.13	.11	.09	.22	.24	.12	.09	.04
	4	3	5	21	8	11	10	13	8	2	64	8

SIGMA-T FOR SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.37	27.44	27.37	27.45	27.38	27.41	27.46	27.58	27.41	27.45	27.42	27.35
	.05	.12	.05	.23	.09	.10	.11	.19	.06	.08	.08	.04
	4	3	4	18	6	8	6	8	4	2	57	7

TEMPERATURE (DEG-CEL) FOR SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.61	-1.40	-1.04	-.09	3.60	8.48	13.16	14.86	13.08	8.20	4.06	3.25
	.73	.53	.48	.72	1.26	2.22	2.32	1.45	1.78	1.80	1.38	.64
	29	13	5	42	154	113	43	108	69	21	50	4
10	-.88	-1.54	-1.43	-.37	2.76	7.24	10.81	13.16	12.24	7.77	3.82	3.26
	.66	.18	.28	.78	1.37	2.20	2.67	2.70	2.44	1.87	1.28	.65
	23	10	5	26	87	77	29	73	63	16	42	4
20	-.85	-1.56	-1.37	-.42	1.95	5.03	6.45	7.30	9.54	6.72	3.72	3.26
	.67	.17	.39	.76	1.33	2.05	2.67	3.97	3.82	3.07	1.34	.66
	23	10	5	26	87	78	29	73	63	16	42	4
30	-.81	-1.55	-1.30	-.48	.99	1.91	3.00	2.62	4.48	4.94	3.47	3.26
	.72	.17	.51	.72	1.11	1.44	1.56	2.09	3.56	3.60	1.36	.69
	23	10	5	26	87	78	29	73	63	16	42	4
50	-.72	-1.52	-1.12	-.72	.07	.22	.97	.69	.42	.83	1.90	2.39
	.70	.20	.73	.59	.95	.84	.80	1.05	.82	.72	1.15	1.21
	23	10	5	26	87	75	28	73	59	16	42	4
75	-.40	-1.24	-.92	-.61	.41	.10	.76	.39	.35	.82	.75	.97
	.72	.59	.57	.71	.83	.72	.97	.72	.61	.59	.58	.31
	23	10	5	26	86	73	25	70	58	14	40	4
100	.39	-.47	-.36	.07	1.33	.72	1.52	.89	.96	1.44	.88	1.50
	.81	1.02	.45	1.01	.84	.90	1.24	.73	.68	1.18	.81	.54
	23	10	5	25	85	73	24	67	57	13	39	4
125	1.22	.20	.82	1.37	2.34	1.51	2.39	1.73	1.80	2.33	1.15	2.35
	.87	.64	.33	1.12	.84	.99	1.40	.89	.88	1.44	.89	.53
	23	9	5	23	82	63	20	65	50	10	29	4
150	2.06	.94	1.89	2.38	3.24	2.43	3.89	2.56	2.87	3.17	2.02	3.06
	.87	.78	.44	1.27	.92	.96	1.17	.85	1.12	.98	1.08	1.26
	20	9	5	20	81	59	13	56	49	5	27	3
175	3.03	2.00	2.94	3.35	4.11	3.51	4.58	3.50	3.85	4.00	3.18	4.31
	.76	.93	.55	1.18	.90	.80	.89	.71	1.12	.72	.97	1.21
	19	7	5	20	80	57	13	56	44	5	26	2
200	4.04	2.82	3.84	4.04	4.74	4.26	5.09	4.21	4.51	4.65	4.07	5.01
	.59	.91	.55	1.03	.91	.74	.77	.50	1.09	.71	.84	.99
	16	7	5	18	76	56	13	52	42	5	25	2
225	4.58	3.53	4.45	4.60	5.05	4.72	5.36	4.65	4.98	5.12	4.65	5.46
	.50	.94	.46	.80	.93	.81	.72	.44	.92	.68	.64	.62
	15	7	5	16	74	53	12	49	29	4	24	2
250	4.84	4.12	4.81	5.00	5.19	5.03	5.41	4.89	5.16	5.31	4.83	5.52
	.50	.87	.44	.59	1.05	.90	.76	.43	.78	.47	.55	.33
	12	7	4	14	54	45	7	40	19	4	17	2

TEMPERATURE (DEG-CEL) FOR SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	5.00	5.17	4.73	5.45	5.09	4.85	4.86	4.98	5.31		5.07	5.41
	.75	.37	.41	.28	.40	.46	.03	.30	.38		.54	.16
	8	3	3	7	14	12	3	17	6		10	2

SALINITY FOR SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.58	31.74	31.47	31.72	31.20	30.68	30.80	30.05	29.77	30.83	31.18	31.16
	.28	.14	.23	.25	.53	.71	1.01	.53	.54	.13	.23	.10
	13	7	3	26	78	50	18	42	27	3	12	4
10	31.58	31.70	31.61	31.93	31.55	31.04	31.28	30.51	29.79		31.23	31.16
	.34	.18	.35	.20	.41	.48	1.69	.32	.58		.20	.09
	7	4	3	10	11	14	4	9	21		12	4
20	31.64	31.70	31.69	31.94	31.64	31.51	31.46	31.09	30.12		31.33	31.16
	.37	.18	.23	.19	.38	.28	.91	.34	.71		.21	.08
	7	4	3	10	11	14	4	9	21		12	4
30	31.75	31.70	31.78	31.97	31.81	31.81	31.65	31.51	30.82		31.46	31.21
	.26	.18	.14	.19	.26	.28	.17	.42	.63		.28	.13
	7	4	3	10	11	14	4	9	21		12	4
50	31.82	31.77	31.99	32.06	32.13	32.16	32.04	32.07	31.93		31.96	31.67
	.18	.17	.17	.19	.15	.21	.11	.15	.21		.46	.54
	7	4	3	10	11	14	4	9	21		12	4
75	32.04	31.86	32.05	32.24	32.55	32.53	32.47	32.43	32.40		32.51	32.43
	.29	.10	.23	.20	.20	.27	.11	.11	.16		.28	.14
	7	4	3	10	11	14	4	9	21		12	4
100	32.58	32.27	32.38	32.75	32.92	32.92	32.97	32.78	32.77		32.79	32.94
	.48	.21	.13	.40	.39	.31	.26	.08	.20		.25	.10
	7	4	3	10	12	14	4	9	21		12	4
125	33.00	32.80	32.85	33.37	33.42	33.26	33.31	33.03	33.18		33.09	33.31
	.50	.24	.12	.35	.18	.29	.20	.39	.19		.30	.16
	7	4	3	10	11	12	3	9	18		12	4
150	33.42	33.23	33.26	33.75	33.71	33.59	33.73	33.50	33.55		33.51	33.56
	.42	.29	.01	.32	.15	.23	.19	.14	.27		.33	.41
	7	4	3	10	11	12	3	9	18		11	3
175	33.76	33.73	33.61	34.04	33.89	33.88	34.10	33.83	33.82		33.84	34.03
	.30	.14	.04	.32	.30	.20	.15	.14	.35		.37	.28
	6	3	3	10	12	10	3	9	16		10	2
200	34.12	33.98	33.91	34.24	34.18	34.14	34.38	34.09	34.01		34.07	34.32
	.24	.17	.05	.26	.23	.18	.05	.11	.40		.38	.30
	5	3	3	10	11	10	3	9	16		10	2
225	34.29	34.25	34.16	34.42	34.41	34.33	34.56	34.30	34.11		34.22	34.51
	.16	.11	.05	.19	.07	.17	.03	.10	.42		.35	.23
	5	3	3	9	11	11	3	9	9		10	2
250	34.41	34.43	34.36	34.54	34.50	34.43	34.67	34.42	34.24		34.32	34.62
	.11	.07	.10	.13	.07	.13	.02	.09	.35		.38	.19
	5	4	3	9	11	10	3	10	5		10	2

SALINITY FOR SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	34.58	34.67	34.59	34.66	34.64	34.63	34.87	34.65	34.57		34.65	34.74
	.06	.09	.10	.13	.03	.11	.02	.07			.13	.14
	5	3	3	8	10	9	2	8	1		9	2

SIGMA-T FOR SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.40	25.56	25.33	25.50	24.83	23.82	23.22	22.19	22.29	23.70	24.82	24.82
	.21	.11	.19	.22	.47	.76	.86	.67	.64	.11	.22	.03
	13	7	3	26	78	50	18	42	27	3	12	4
10	25.39	25.52	25.44	25.69	25.28	24.25	23.99	23.04	22.37		24.87	24.82
	.26	.14	.30	.16	.35	.66	1.41	.50	.63		.20	.03
	7	4	3	10	11	14	4	9	21		12	4
20	25.43	25.52	25.50	25.70	25.39	24.88	24.67	24.13	22.89		24.97	24.82
	.28	.15	.20	.16	.31	.34	.98	.64	.88		.24	.05
	7	4	3	10	11	14	4	9	21		12	4
30	25.51	25.52	25.58	25.73	25.55	25.44	25.24	25.12	24.25		25.08	24.87
	.19	.15	.13	.16	.22	.33	.23	.47	.89		.29	.13
	7	4	3	10	11	14	4	9	21		12	4
50	25.57	25.57	25.73	25.80	25.85	25.84	25.70	25.74	25.64		25.58	25.30
	.12	.15	.14	.15	.12	.20	.09	.17	.18		.44	.51
	7	4	3	10	11	14	4	9	21		12	4
75	25.73	25.64	25.77	25.94	26.16	26.15	26.07	26.05	26.02		26.10	26.01
	.19	.09	.18	.14	.15	.22	.07	.12	.14		.23	.13
	7	4	3	10	11	14	4	9	21		12	4
100	26.14	25.93	26.03	26.29	26.39	26.42	26.43	26.32	26.30		26.31	26.39
	.32	.13	.10	.23	.29	.21	.15	.09	.17		.19	.06
	7	4	3	10	12	14	4	9	21		12	4
125	26.42	26.33	26.34	26.68	26.70	26.64	26.63	26.48	26.58		26.51	26.62
	.33	.16	.11	.21	.12	.18	.13	.29	.13		.20	.11
	7	4	3	9	11	12	3	9	18		12	4
150	26.69	26.61	26.60	26.87	26.86	26.84	26.87	26.79	26.80		26.76	26.75
	.26	.18	.03	.16	.07	.13	.11	.08	.15		.18	.23
	7	4	3	9	11	12	3	9	18		11	3
175	26.90	26.90	26.81	27.02	26.94	26.99	27.06	26.96	26.93		26.94	27.00
	.15	.08	.04	.15	.21	.10	.08	.05	.19		.20	.09
	6	3	3	9	12	10	3	9	16		10	2
200	27.09	27.02	26.98	27.12	27.09	27.13	27.21	27.10	27.02		27.04	27.16
	.10	.10	.04	.11	.14	.11	.05	.04	.21		.21	.13
	5	3	3	9	11	10	3	9	16		10	2
225	27.19	27.15	27.11	27.22	27.24	27.24	27.33	27.22	27.06		27.12	27.26
	.08	.08	.05	.08	.04	.12	.07	.04	.26		.22	.11
	5	3	3	8	11	11	3	9	9		10	2
250	27.28	27.28	27.23	27.30	27.31	27.29	27.42	27.31	27.15		27.18	27.34
	.07	.06	.06	.06	.04	.07	.07	.03	.19		.26	.11
	5	4	3	8	11	10	3	10	5		10	2

SIGMA-T FOR SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

(CONTINUED)

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
300	27.42	27.41	27.40	27.39	27.43	27.44	27.61	27.45	27.40		27.41	27.45
	.06	.11	.04	.07	.04	.08	.02	.05			.10	.09
	5	3	3	7	10	9	2	8	1		9	2

TEMPERATURE (DEG-CEL) FOR SUBAREA 11 - SHEDIAC VALLEY

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.35	-1.16		.89	6.15	9.19	14.04	15.00	12.11	8.93	4.88	3.42
	1.49	.69		1.26	1.59	2.23	2.22	1.83	1.97	2.20	2.13	2.38
	12	10		28	317	560	308	493	676	232	36	6
10	-.85	-1.48		.30	4.56	7.30	11.52	13.48	11.54	8.26	4.67	3.58
	.60	.18		1.02	1.57	2.20	2.44	2.27	1.86	2.07	2.01	2.31
	4	9		24	227	424	264	372	514	187	36	6
20	-.83	-1.52		.00	2.72	5.10	7.47	9.61	10.12	7.72	4.56	3.66
	.59	.15		.81	1.58	2.08	2.85	3.14	2.28	1.95	1.81	2.32
	4	9		24	221	419	261	369	504	184	36	6
30	-.77	-1.52		-.22	1.33	3.17	4.36	5.60	7.28	6.96	4.44	3.76
	.57	.14		.86	1.34	1.76	2.99	3.24	2.87	1.97	1.66	2.38
	4	9		23	207	408	249	356	458	169	34	6
50	.11	-1.49		-.54	.25	.69	1.03	1.47	2.46	4.39	3.81	4.30
	.32	.17		.91	.99	.97	1.38	2.03	2.51	2.19	1.54	2.78
	4	9		19	165	305	186	264	337	137	33	5
75	1.01	-1.10		-.68	.43	.11	.32	.73	.82	1.67	1.99	4.42
	1.29	.35		.63	1.20	.64	.57	1.54	.91	1.44	.80	2.36
	2	8		14	127	226	129	190	220	97	20	4
100	2.25	-1.33		.04	.99	.50	.49	.89	.98	1.21	.95	8.00
		.07		1.05	1.55	.65	.72	1.19	.63	.81	.66	
	1	2		6	61	115	60	81	118	33	7	1
125				.06	2.83	1.08	2.04	1.39	2.09	1.92	.76	
					3.17	.63	.92	.09	.94	.54		
				1	10	9	4	2	9	11	1	

SALINITY FOR SUBAREA 11 - SHEDIAC VALLEY

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	30.82	31.48		30.22	28.29	28.02	27.61	28.33	28.95	29.36	29.75	30.67
	.30	.15		1.06	1.17	1.49	1.51	.72	.74	.58	.17	.30
	9	3		15	142	227	107	191	268	74	6	2
10	30.73	31.49		30.49	29.10	28.46	27.76	28.61	28.81	29.70	29.74	30.64
	.41	.11		.91	1.13	1.20	1.71	.82	.83	.71	.15	.29
	4	3		11	52	87	65	72	110	36	6	2
20	30.74	31.47		30.63	29.77	29.25	28.99	29.50	29.12	29.87	29.78	30.63
	.41	.09		.80	.99	1.21	1.59	1.06	.85	.78	.12	.30
	4	3		11	50	85	64	72	110	33	6	2
30	30.75	31.46		30.91	30.36	29.97	29.99	30.38	29.96	30.18	29.92	30.71
	.40	.11		.86	.94	1.17	1.49	1.06	.96	.81	.23	.27
	4	3		10	42	85	62	70	96	29	6	2
50	31.14	31.49		31.42	31.09	31.27	31.34	31.54	31.26	31.06	30.50	31.09
	.64	.09		.68	.75	.71	.61	.67	.80	.69	.53	.04
	4	3		10	39	63	44	52	79	20	6	2
75	31.63	31.70		31.91	31.86	31.87	32.05	32.17	32.17	32.18	31.69	31.55
	.50			.64	.49	.87	.46	.36	.43	.46	.20	.13
	2	1		7	23	52	32	42	52	12	3	2
100	31.68			32.34	32.35	32.45	32.50	32.72	32.51		32.10	
				.65	.43	.70	.58	.28	.73			
	1			4	9	19	7	10	35		1	
125				32.69	32.97	32.39	33.34		33.09			
					0.00				.42			
				1	2	1	1		4			

SIGMA-T FOR SUBAREA 11 - SHEDIAC VALLEY

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	24.80	25.34		24.25	22.27	21.63	20.51	20.84	21.93	22.70	23.64	24.54
	.25	.12		.89	1.02	1.31	1.32	.77	.74	.68	.12	.22
	9	3		15	142	226	106	190	268	73	6	2
10	24.72	25.35		24.50	23.17	22.23	20.97	21.35	21.90	23.24	23.62	24.47
	.35	.09		.76	.99	1.02	1.52	.85	.83	.74	.13	.22
	4	3		11	52	87	65	72	110	36	6	2
20	24.72	25.34		24.62	23.81	23.08	22.64	22.72	22.32	23.40	23.64	24.45
	.34	.08		.66	.85	1.04	1.45	1.21	.89	.77	.12	.23
	4	3		11	50	85	64	72	110	33	6	2
30	24.74	25.33		24.85	24.35	23.84	23.76	23.90	23.31	23.74	23.76	24.52
	.34	.09		.72	.82	1.01	1.30	1.24	1.08	.75	.22	.21
	4	3		10	42	85	62	70	96	29	6	2
50	25.01	25.35		25.28	24.99	25.09	25.12	25.22	24.85	24.67	24.21	24.79
	.50	.07		.57	.63	.59	.55	.75	.93	.63	.44	0.00
	4	3		10	39	63	44	52	79	20	6	2
75	25.37	25.52		25.67	25.58	25.60	25.73	25.80	25.78	25.78	25.35	25.14
	.47			.50	.44	.70	.38	.40	.43	.37	.20	.14
	2	1		7	23	52	32	42	52	12	3	2
100	25.32			25.99	25.97	26.05	26.07	26.27	26.06		25.78	
				.50	.34	.55	.43	.23	.57			
	1			4	9	19	7	10	35		1	
125				26.26	26.42	25.98	26.65		26.46			
					0.00				.30			
				1	2	1	1		4			

TEMPERATURE (DEG-CEL) FOR SUBAREA 12 - NORTHWEST MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.54	-.64	-1.28	.31	5.03	9.39	14.53	15.57	12.99	9.14	4.58	2.77
	.95	.85	.31	.87	1.56	2.42	2.51	1.62	1.78	2.39	1.68	.49
	12	15	9	44	451	661	176	521	343	91	98	13
10	-.11	-1.38	-1.37	.22	3.93	8.24	11.92	14.41	12.55	8.66	4.48	2.77
	.57	.31	.31	.85	1.43	2.43	3.49	2.71	1.86	2.27	1.61	.47
	4	14	7	36	271	470	115	325	284	78	98	13
20	-.02	-1.39	-1.28	-.01	2.62	4.99	5.45	7.59	9.72	7.53	4.45	2.79
	.55	.28	.28	.82	1.44	2.38	2.65	3.96	3.49	2.46	1.59	.48
	4	14	7	36	271	467	115	325	280	75	99	13
30	.01	-1.38	-1.09	-.30	1.27	2.02	2.12	2.55	4.32	5.89	4.08	2.83
	.52	.29	.32	.75	1.17	1.61	1.83	2.03	3.35	2.84	1.56	.46
	4	14	7	36	269	463	114	320	277	75	99	13
50	.30	-1.15	-1.12	-.68	.09	.01	.17	.31	.59	2.02	2.35	2.73
	.48	.61	.41	.55	.74	.87	.74	.65	1.09	2.25	1.49	.48
	4	14	4	34	227	416	94	261	235	60	76	9
75	.83	-.48		-.33	.34	.03	.34	.33	.32	.98	1.01	
	.56			1.00	.81	.77	.69	.65	.60	.94	1.12	
	2	1		13	53	111	22	59	90	11	11	
100				1.03	.91	.92	.60	.29	.73	1.13	.30	
				2.12	1.12	.78		.82	.50		.79	
				4	10	10	1	6	19	1	3	
125				.22	1.79	1.52	1.55	.15	1.48		-.12	
				.17	1.60	1.15		.93	.72			
				2	4	4	1	3	7		1	

SALINITY FOR SUBAREA 12 - NORTHWEST MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.41	31.44	31.40	31.11	30.10	29.47	28.65	28.68	29.26	29.67	30.57	30.93
	.13	.27	.49	.60	.94	1.14	1.00	.67	.65	.59	.45	.58
	10	6	5	23	229	342	91	228	138	41	43	8
10	31.34	31.44	31.40	31.16	30.45	29.70	29.00	28.67	29.20	29.69	30.56	30.96
	.02	.24	.53	.60	.92	.84	1.00	.77	.63	.57	.44	.54
	3	5	5	19	50	149	30	53	79	27	43	8
20	31.41	31.45	31.40	31.30	30.75	30.45	30.24	30.19	29.54	29.81	30.61	31.03
	.09	.24	.53	.55	.73	.79	.98	.85	.71	.63	.45	.46
	3	5	5	19	50	149	30	53	79	24	44	8
30	31.51	31.47	31.43	31.46	31.05	31.16	31.09	30.97	30.63	30.28	30.83	31.13
	.21	.25	.55	.53	.61	.53	.51	.63	.70	.61	.43	.44
	3	5	5	19	49	149	29	52	79	24	44	8
50	31.64	31.62	31.51	31.84	31.53	31.78	31.81	31.76	31.73	31.36	31.59	31.52
	.33	.38	.55	.52	.47	.38	.59	.45	.41	.62	.46	.13
	3	5	5	18	45	140	24	43	67	17	27	5
75	32.06			32.19	31.79	32.19	32.22	32.47	32.35	32.09	32.18	
	.76			.64	.56	.48	.45	.27	.21			
	2			6	9	24	5	6	27	1	1	

SIGMA-T FOR SUBAREA 12 - NORTHWEST MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.25	25.31	25.27	24.98	23.81	22.72	21.22	20.95	21.97	22.88	24.28	24.70
	.12	.22	.40	.51	.84	1.11	1.06	.71	.70	.73	.44	.44
	10	6	5	23	229	341	91	228	138	40	43	8
10	25.17	25.31	25.33	25.02	24.29	22.94	21.81	21.09	21.96	23.03	24.28	24.71
	.02	.19	.49	.50	.83	.77	.95	.97	.70	.73	.44	.41
	3	5	4	19	50	149	30	53	79	27	43	8
20	25.23	25.32	25.32	25.15	24.61	23.93	23.75	23.55	22.45	23.15	24.32	24.77
	.08	.19	.49	.45	.64	.81	.94	1.11	.83	.80	.44	.35
	3	5	4	19	50	149	30	53	79	24	44	8
30	25.30	25.33	25.35	25.30	24.90	24.90	24.81	24.70	24.16	23.73	24.52	24.84
	.18	.20	.49	.43	.52	.50	.49	.66	.82	.71	.42	.33
	3	5	4	19	49	149	29	52	79	24	44	8
50	25.39	25.46	25.42	25.61	25.35	25.55	25.56	25.50	25.45	25.02	25.24	25.15
	.26	.30	.47	.42	.39	.32	.47	.36	.36	.68	.45	.11
	3	5	4	18	45	140	24	43	67	17	27	5
75	25.72			25.89	25.56	25.87	25.88	26.08	25.99	25.78	25.76	
	.57			.50	.46	.39	.36	.21	.17			
	2			6	9	24	5	6	27	1	1	

TEMPERATURE (DEG-CEL) FOR SUBAREA 13 - NORTHEAST MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-.06	-.80		-.06	3.95	8.17	13.61	15.88	13.94	9.64	4.96	
	.95	.85		.69	1.53	2.52	2.23	1.57	1.64	.99	1.70	
	20	8		9	159	155	48	136	130	25	44	
10	.34	-1.37		-.26	3.34	7.11	12.47	15.32	13.42	9.31	4.73	
	.60	.29		1.01	1.25	2.24	2.44	1.57	2.27	1.06	1.50	
	13	6		4	83	103	34	77	108	18	37	
20	.28	-1.39		-.35	2.46	4.59	6.68	8.89	10.43	8.98	4.61	
	.55	.29		.96	1.13	2.21	2.95	3.80	3.84	1.18	1.42	
	13	6		4	82	97	33	70	107	17	36	
30	.23	-1.38		-.45	1.36	2.07	1.77	3.58	4.18	6.30	4.48	
	.52	.30		.88	1.13	1.69	1.58	2.94	3.60	3.13	1.47	
	11	6		4	79	87	29	62	77	14	33	
50	.19	-1.35		-.51	.29	.36	.41	1.55	.78	.53	2.52	
	.71	.31		.90	.69	.74	.54	2.81	1.30	.60	1.39	
	6	6		3	60	63	18	37	54	10	25	
75	-.36	-1.22		.43	.54	.54	-.00	.84	.67	-.01	1.79	
	.37	.63		.65	.94	.89		.57	.66	.36	1.54	
	2	3		2	9	13	1	6	11	5	3	

SALINITY FOR SUBAREA 13 - NORTHEAST MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	31.46	31.78		31.40	31.14	30.84	30.49	29.42	29.73	30.81	31.14	
	.62	.12		.18	.46	.76	.50	.68	.64	.20	.45	
	8	4		5	77	70	26	55	61	9	6	
10	31.31	31.87		31.53	31.58	30.87	30.72	29.50	29.62	30.65	31.01	
		.08				.54	.43	.30	.63	.37	.49	
	1	2		1	1	16	13	6	39	2	2	
20	31.32	31.86		31.55	31.56	31.14	31.21	30.31	29.97	30.72	31.03	
		.08				.37	.46	.36	.73	.39	.52	
	1	2		1	1	15	13	6	38	2	2	
30	31.45	31.86		31.57		31.49	31.92	31.08	30.90	31.16		
		.08				.30	.36	.44	.73	.91		
	1	2		1		13	12	5	30	2		
50	31.99	31.87		31.90	31.67	31.86	32.23	32.08	31.89	33.12	31.91	
		.07			.30	.18	.27	.25	.33			
	1	2		1	3	11	8	3	24	1	1	

SIGMA-T FOR SUBAREA 13 - NORTHEAST MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	25.31	25.58		25.24	24.75	23.99	22.72	21.46	22.14	23.75	24.91	
	.50	.10		.15	.42	.81	.63	.68	.73	.22	.26	
	8	4		5	76	70	26	54	61	8	5	
10	25.15	25.66		25.38	25.18	24.11	22.96	21.71	22.06	23.67	24.63	
		.06				.69	.66	.30	.70	.33	.34	
	1	2		1	1	16	13	6	39	2	2	
20	25.17	25.66		25.40	25.26	24.63	24.45	23.33	22.69	23.71	24.65	
		.06				.51	.66	.76	.94	.28	.37	
	1	2		1	1	15	13	6	38	2	2	
30	25.26	25.65		25.42		25.11	25.55	24.42	24.38	24.58		
		.07				.36	.37	.34	.90	1.24		
	1	2		1		13	12	5	30	2		
50	25.66	25.66		25.68	25.44	25.57	25.88	25.68	25.54	26.61	25.51	
		.06			.27	.15	.22	.14	.39			
	1	2		1	3	11	8	3	24	1	1	

TEMPERATURE (DEG-CEL) FOR SUBAREA 14 - NORTHUMBERLAND STRAIT WEST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	-1.47			1.44	7.22	11.58	16.16	17.18	14.86	11.00	7.52	
	.06			2.65	1.70	2.22	1.86	1.29	1.49	1.61	1.72	
	3			6	132	354	376	358	380	180	12	
10	-1.50			.33	4.81	8.97	13.20	14.98	14.44	10.95	7.16	
				1.88	2.00	2.42	2.29	2.49	1.60	1.56	1.93	
	1			6	119	296	341	292	307	132	9	
20				-.03	3.03	6.29	7.96	9.67	12.66	10.25	6.98	
				1.76	1.98	2.46	2.31	3.28	2.33	1.43	1.88	
				5	105	251	311	258	259	116	9	
30				.05	.91	2.73	3.34	5.78	8.05	7.88	6.44	
				.34	.71	2.07	1.59	3.22	3.74	2.18	1.24	
				2	22	58	24	39	84	20	3	

SALINITY FOR SUBAREA 14 - NORTHUMBERLAND STRAIT WEST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	29.49			30.06	28.13	28.38	27.98	28.01	28.25	28.51	29.36	
	.77			1.24	1.60	1.06	1.10	.85	.81	.63	.05	
	3			4	69	134	160	148	191	85	2	
10	28.73			30.68	29.13	28.75	28.21	28.13	28.29	28.60	29.34	
				.67	1.08	.89	.89	.75	.72	.47	.01	
	1			4	60	75	125	90	138	72	2	
20				30.72	29.81	29.15	28.94	28.76	28.56	28.83	29.34	
				.82	.77	.84	.84	.70	.66	.46	.02	
				3	54	71	121	86	109	62	2	
30				30.94	30.75	30.59	30.26	30.30	29.27	29.50		
					.44	.23	.31	.20	.92	.38		
				1	7	4	9	3	22	6		

SIGMA-T FOR SUBAREA 14 - NORTHUMBERLAND STRAIT WEST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	23.73			24.10	22.02	21.62	20.42	20.20	20.86	21.77	23.00	
	.62			1.11	1.34	1.02	1.03	.76	.71	.53	.18	
	3			4	68	134	160	147	189	85	2	
10	23.11			24.66	23.08	22.32	21.16	20.85	20.94	21.84	22.96	
				.54	.96	.84	.83	.88	.65	.45	.21	
	1			4	60	75	125	89	138	72	2	
20				24.71	23.75	22.84	22.48	21.99	21.43	22.12	23.04	
				.65	.72	.82	.86	.95	.77	.49	.11	
				3	54	71	121	85	109	62	2	
30				24.86	24.68	24.50	24.15	24.02	22.54	22.91		
					.37	.22	.29	.09	1.21	.55		
				1	7	4	9	3	22	6		

TEMPERATURE (DEG-CEL) FOR SUBAREA 15 - SOUTHERN MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	.23		-.60	.29	4.55	10.54	16.70	16.61	14.57	9.90	5.93	3.16
	.55			1.00	1.77	2.41	2.08	1.88	1.63	2.12	1.63	.92
	20		1	30	330	525	345	487	334	129	110	17
10	.17		-.74	.03	3.58	9.17	14.25	15.77	14.17	9.66	5.77	3.04
	.32			.86	1.45	2.21	3.33	2.18	1.70	2.13	1.54	.88
	18		1	29	220	371	296	322	264	107	110	16
20	.20		-.77	-.10	2.41	4.95	6.17	8.74	11.34	8.70	5.69	3.02
	.33			.72	1.39	2.42	3.32	3.83	3.38	2.75	1.50	.89
	18		1	29	219	368	279	317	261	103	109	16
30	.31		-.78	-.35	.97	1.67	1.88	3.30	4.88	6.31	5.28	3.06
	.36			.61	1.19	1.58	1.86	2.51	3.65	3.29	1.44	.91
	18		1	28	203	341	255	269	235	87	100	14
50	.50		-1.12	-1.06	-.21	-.30	-.02	.46	.55	.79	2.13	2.67
	.39			.49	.75	.69	.52	.89	1.35	.98	1.52	.89
	10		1	17	128	223	146	158	129	47	77	8

SALINITY FOR SUBAREA 15 - SOUTHERN MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	30.71		30.99	31.22	30.56	29.97	28.86	28.38	28.81	29.20	30.26	30.46
	.47			.48	.75	.91	1.02	.91	.75	.54	1.53	.79
	9		1	15	157	275	158	205	122	71	49	10
10	30.64		30.96	31.24	30.73	29.91	29.32	28.41	28.42	29.24	30.07	30.48
	.44			.40	.78	.93	1.15	1.27	.70	.61	.60	.76
	9		1	15	48	121	111	77	61	50	49	10
20	30.67		30.96	31.31	30.87	30.52	30.64	29.75	28.84	29.40	30.11	30.52
	.42			.42	.63	.87	1.02	1.03	.86	.67	.58	.74
	9		1	15	48	121	104	77	61	47	48	10
30	30.73		30.98	31.37	31.08	31.16	31.16	30.72	30.06	29.92	30.28	30.43
	.37			.39	.41	.47	.48	.59	.95	.74	.52	.68
	9		1	15	39	107	93	55	55	39	45	9
50	31.11		31.23	31.59	31.40	31.66	31.58	31.44	31.43	31.50	31.21	31.25
	.23			.32	.33	.28	.18	.27	.32	.34	.60	.38
	4		1	11	26	71	53	29	33	21	34	4

SIGMA-T FOR SUBAREA 15 - SOUTHERN MAGDALEN SHALLOWS

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	24.67		24.92	25.08	24.23	22.95	20.89	20.43	21.35	22.42	23.73	24.28
	.38			.43	.68	.98	1.03	.89	.79	.65	.61	.66
	9		1	15	157	274	158	203	122	70	49	10
10	24.61		24.90	25.10	24.51	23.04	21.63	20.68	21.04	22.43	23.74	24.30
	.34			.35	.70	.86	1.17	1.32	.72	.70	.59	.62
	9		1	15	48	120	111	77	61	50	49	10
20	24.63		24.90	25.17	24.70	24.06	24.00	23.00	21.72	22.59	23.78	24.33
	.33			.36	.52	.86	1.02	1.15	1.07	.74	.58	.60
	9		1	15	48	120	104	77	61	47	48	10
30	24.68		24.92	25.22	24.92	24.92	24.88	24.43	23.63	23.35	23.95	24.26
	.29		.67	.33	.33	.47	.52	.60	1.27	.87	.52	.55
	9		1	15	39	107	93	55	55	39	45	9
50	24.97		25.13	25.42	25.25	25.46	25.38	25.25	25.21	25.27	24.93	24.96
	.19			.27	.27	.24	.14	.24	.26	.31	.56	.38
	4		1	11	26	71	53	29	30	21	34	4

TEMPERATURE (DEG-CEL) FOR SUBAREA 16 - CAPE BRETON CHANNEL

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	.24	-.80		-.35	4.31	9.39	16.40	17.21	15.10	10.78	7.40	7.80
	.23	.72		.99	1.98	2.62	2.44	1.50	2.01	1.87	1.78	
	16	3		13	270	360	174	560	296	110	67	1
10	.26	-.89		-.57	3.21	7.93	14.94	15.97	14.60	10.27	6.99	6.40
	.24	.81		.97	1.73	2.52	2.68	2.12	2.22	2.29	1.54	
	16	3		11	166	224	137	449	249	88	67	1
20	.21	-.85		-.73	2.00	4.85	8.89	9.09	11.46	8.95	6.68	6.10
	.17	.82		.80	1.53	2.65	4.13	4.50	3.51	3.34	1.42	
	16	3		11	164	216	135	443	245	88	66	1
30	.26	-.80		-.80	1.14	2.25	3.71	3.98	6.05	7.42	6.03	5.40
	.15	.82		.81	1.39	2.31	2.91	3.12	3.76	4.10	1.48	
	16	3		10	157	205	129	398	213	72	66	1
50	.46	-.66		-1.07	.47	.54	.90	.91	1.19	2.67	3.35	3.50
	.39	.83		.52	1.25	1.06	1.03	.92	1.08	2.52	1.42	
	15	3		7	125	146	98	239	127	53	51	1
75	.85	-.90		-.21	.57	.72	.89	.84	1.01	1.21	2.20	
	.48	.43		.39	.91	.72	.63	.69	.62	.58	.79	
	11	2		4	57	51	32	103	56	20	17	
100	1.26			1.12	1.42	1.39	1.47	1.44	1.47	1.15	1.50	
	.83			1.54	1.07	.88	.95	.82	.75	.52	.83	
	7			2	44	35	25	62	41	16	11	
125	2.21			3.25	2.66	2.09	2.67	2.22	2.32	1.80	2.08	
	1.18			1.63	1.04	.98	1.08	1.00	1.05	.45	.91	
	4			2	22	20	11	25	21	4	10	
150	2.66			4.25	3.58	2.73	3.99	3.20	3.36	2.59	3.36	
	1.14				1.23	1.54	.75	.55	.93	.92	1.56	
	3			1	5	6	5	4	12	2	4	

SALINITY FOR SUBAREA 16 - CAPE BRETON CHANNEL

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	30.58	31.46		31.43	30.62	30.31	29.73	29.29	29.18	29.47	28.92	29.42
	.74			.45	.80	.70	.71	.96	.88	.71	1.68	
	7	1		7	135	179	98	252	100	48	15	1
10	30.66	31.55		31.45	30.89	30.49	29.82	29.76	28.84	29.26	29.49	29.45
	.74			.37	.53	.75	.71	.83	.81	.69	.22	
	7	1		7	31	48	62	141	53	29	15	1
20	30.89	31.58		31.52	31.12	30.81	30.33	30.57	29.26	29.40	29.74	29.51
	.61			.35	.43	.61	.81	.75	.85	.68	.57	
	7	1		7	29	47	60	141	53	30	14	1
30	31.08	31.56		31.56	31.29	31.08	30.97	31.15	30.20	29.93	29.94	29.51
	.34			.38	.39	.57	.68	.60	.80	.98	.61	
	7	1		6	27	45	59	129	48	26	14	1
50	31.22	31.55		31.80	31.60	31.43	31.74	31.80	31.49	31.20	30.39	29.65
	.29			.45	.35	.44	.53	.37	.50	.65	.67	
	6	1		5	25	37	50	83	42	22	15	1
75	31.96	31.65		32.51	32.20	32.16	32.67	32.50	32.27	31.99	31.95	
	.44			.16	.26	.46	.55	.22	.30	.30	.40	
	5	1		2	11	11	15	38	14	5	3	
100	32.47			33.44	32.81	32.62	33.20	33.04	32.68	32.44	32.43	
	.59				.25	.25	.51	.31	.39	.22		
	3			1	11	7	13	22	11	5	1	
125	32.79			34.20	33.38	33.27	33.80	33.56	32.93	32.83	32.80	
	.76				.30	.50	.36	.45	.32			
	2			1	5	4	6	10	7	1	1	
150	33.43				33.88	33.44	33.95	34.15	33.42		33.17	
	.35				.02		.52		.42			
	2				2	1	4	1	5		1	

SIGMA-T FOR SUBAREA 16 - CAPE BRETON CHANNEL

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	24.56	25.32		25.28	24.28	23.35	21.62	21.17	21.46	22.38	22.44	22.95
	.60			.36	.67	.77	.91	.99	.97	.74	1.16	
	7	1		7	134	179	98	250	100	48	15	1
10	24.62	25.40		25.30	24.61	23.58	21.85	21.83	21.18	22.19	22.98	23.15
	.60			.29	.54	.81	.93	.97	.93	.67	.33	
	7	1		7	31	48	62	141	53	29	15	1
20	24.81	25.42		25.36	24.88	24.23	23.18	23.55	21.90	22.40	23.25	23.24
	.50			.28	.44	.74	1.21	1.20	1.12	.73	.60	
	7	1		7	29	47	60	141	53	30	14	1
30	24.97	25.40		25.39	25.07	24.74	24.52	24.69	23.57	23.13	23.47	23.31
	.28			.31	.38	.66	.84	.77	1.08	1.17	.60	
	7	1		6	27	45	59	129	47	26	14	1
50	25.08	25.39		25.58	25.35	25.20	25.43	25.49	25.20	24.85	24.16	23.61
	.24			.37	.38	.40	.45	.33	.44	.73	.59	
	6	1		5	25	37	50	83	42	22	14	1
75	25.67	25.47		26.13	25.87	25.81	26.20	26.07	25.88	25.65	25.52	
	.39			.10	.22	.38	.42	.17	.25	.24	.40	
	5	1		2	11	11	15	38	14	5	3	
100	26.02			26.74	26.27	26.17	26.56	26.47	26.18	26.00	25.93	
	.41				.21	.17	.34	.22	.28	.19		
	3			1	11	7	13	22	11	5	1	
125	26.26			27.13	26.63	26.62	26.91	26.80	26.34	26.29	26.26	
	.53				.20	.34	.22	.26	.22			
	2			1	5	4	6	10	7	1	1	
150	26.72				26.99	26.86	26.97	27.18	26.65		26.59	
	.19				.05		.34		.25			
	2				2	1	4	1	5		1	

TEMPERATURE (DEG-CEL) FOR SUBAREA 17 - NORTHUMBERLAND STRAIT EAST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	.22	-1.39	-.70	1.51	5.77	10.89	17.53	18.71	16.81	12.73	8.72	4.61
	.51	.38		2.44	1.97	2.47	2.07	1.16	1.50	1.82	1.31	.22
	38	4	1	11	227	694	627	586	265	127	73	43
10	.29	-1.27	-.82	-.03	4.49	8.90	15.90	17.67	16.49	12.89	8.96	4.72
	.43	.31		1.27	1.77	2.36	2.30	1.73	1.54	1.80	1.41	.21
	37	3	1	11	185	539	589	498	213	86	37	15
20	.47	-1.21	-.83	-.60	2.35	5.63	11.30	13.33	14.49	12.66	8.81	4.83
	.35	.30		.86	1.68	2.42	3.36	3.66	2.93	1.97	1.35	.17
	35	3	1	8	134	426	429	403	195	80	33	9
30	.82	-1.11	-1.04	-1.27	.91	2.50	5.04	6.21	9.48	11.09	8.28	5.24
	.41	.29		.20	1.68	2.22	3.11	4.54	4.13	3.19	1.43	.31
	32	3	1	5	77	232	202	230	121	50	26	4
50				-1.69	-.08	.57	1.90	1.33	2.30	3.39	6.15	
					.59	.81	3.20	.94	1.93	2.38	2.30	
				1	17	23	16	17	24	9	8	

SALINITY FOR SUBAREA 17 - NORTHUMBERLAND STRAIT EAST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	28.39	30.96	29.61	29.50	29.52	29.31	28.88	28.28	28.22	28.88	28.78	
	.42	.52		.95	.75	.73	.78	1.98	1.46	.55	.98	
	38	2	1	9	79	195	116	133	75	40	18	
10	28.36	30.93	29.56	29.12	29.69	29.28	28.97	28.96	28.27	28.83	28.85	
	.38			2.12	.90	.54	.73	.56	.60	.56	.99	
	37	1	1	9	42	44	93	71	43	34	18	
20	28.45	30.39	29.54	30.20	29.98	29.83	29.32	29.29	28.65	28.89	28.87	
	.39	.64		.62	.76	.56	.57	.52	.49	.54	1.06	
	35	2	1	7	32	36	79	65	42	35	15	
30	28.83	30.68	30.17	30.92	30.69	30.40	29.99	30.15	29.29	29.20	29.46	
	.41			.43	.59	.35	.55	.54	.52	.50	1.55	
	32	1	1	4	20	25	62	41	32	22	6	
50				31.97	31.41	30.95	31.65	31.79	30.70	30.51	32.75	
					.16	.20	1.23	.55	.57	.99		
				1	5	3	4	6	6	4	1	

SIGMA-T FOR SUBAREA 17 - NORTHUMBERLAND STRAIT EAST

MEAN, STANDARD DEVIATION, NO. OF OBSERVATIONS

DEPTH(M)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	22.80	24.92	23.81	23.63	23.27	22.41	20.74	20.02	20.41	21.80	22.23	
	.33	.42		.87	.70	.82	.75	1.56	1.26	.33	.75	
	38	2	1	9	79	194	116	133	75	40	18	
10	22.77	24.90	23.77	23.39	23.69	22.62	21.13	20.68	20.45	21.80	22.40	
	.30			1.71	.72	.55	.79	.61	.63	.29	.84	
	37	1	1	9	38	43	86	68	40	30	14	
20	22.84	24.82	23.77	24.29	24.00	23.54	22.09	21.73	21.13	21.86	22.50	
	.31			.51	.61	.54	.82	.82	.68	.30	.94	
	35	1	1	7	30	34	74	62	40	31	11	
30	23.13	24.69	24.27	24.88	24.58	24.28	23.57	23.60	22.18	22.13	23.10	
	.32			.36	.57	.30	.66	.89	1.03	.62	1.25	
	32	1	1	4	20	24	57	40	31	22	5	
50				25.74	25.23	24.82	25.36	25.47	24.46	24.18	25.56	
					.15	.23	1.03	.44	.56	1.13		
				1	5	2	4	6	6	4	1	

APPENDIX 2

Annual and Semi-Annual Amplitudes and Phases of Temperature and Salinity

SUBAREA 1 - CABOT STRAIT WEST

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	6.13	8.17	7.91	1.61	1.24
10	5.60	7.62	8.00	1.34	1.27
20	4.54	6.14	8.23	.44	1.37
30	3.01	3.99	8.68	.72	4.69
50	1.27	1.97	9.54	1.07	5.01
75	.77	1.04	9.48	.59	5.21
100	.97	.51	8.70	.29	5.28
125	1.70	.34	7.28	.15	5.01
150	2.68	.36	6.78	.18	4.90
175	3.64	.29	6.49	.19	4.62
200	4.41	.24	6.08	.20	4.74
225	4.87	.09	5.86	.26	5.01
250	5.04	.04	5.28	.26	4.92
300	5.03	.24	1.09	.25	5.20
400	4.80	.19	1.35	.14	5.23

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	30.78	.75	2.38	.06	3.45
10	30.85	.68	2.52	.02	4.57
20	31.04	.52	2.93	.02	2.18
30	31.28	.35	3.84	.12	1.86
50	31.70	.29	5.87	.14	2.09
75	32.23	.24	7.19	.01	5.11
100	32.66	.15	8.21	.11	5.26
125	33.09	.05	7.16	.03	5.25
150	33.49	.05	5.54	.03	3.24
175	33.84	.06	3.69	.03	2.80
200	34.11	.07	3.48	.02	2.73
225	34.32	.06	2.59	.02	4.50
250	34.44	.06	2.54	.04	5.54
300	34.60	.06	2.71	.06	5.92
400	34.80	.05	.08	.02	4.89

SUBAREA 2 - CABOT STRAIT EAST

TEMPERATURE

DEPTH	MEAN	ANNUAL AMPL.	ANNUAL PHASE	SEMI - ANNUAL AMPL.	SEMI - ANNUAL PHASE
0	5.58	7.21	7.87	1.51	1.26
10	5.10	6.66	7.97	1.25	1.22
20	4.10	5.12	8.19	.36	.74
30	2.90	3.48	8.66	.64	4.67
50	1.45	1.86	9.53	.83	4.91
75	.91	1.11	9.94	.35	5.20
100	.97	.56	10.18	.14	5.35
125	1.44	.17	10.34	.08	4.40
150	2.25	.13	8.38	.12	4.70
175	3.38	.14	8.33	.16	4.90
200	4.41	.08	8.59	.14	4.95
225	5.04	.11	11.30	.18	5.03
250	5.33	.11	.40	.15	4.53
300	5.24	.20	.87	.10	5.58
400	4.89	.10	.15	.06	4.03

SALINITY

DEPTH	MEAN	ANNUAL AMPL.	ANNUAL PHASE	SEMI - ANNUAL AMPL.	SEMI - ANNUAL PHASE
0	31.43	.43	1.34	.08	3.66
10	31.51	.33	1.43	.05	2.88
20	31.68	.16	1.48	.05	2.12
30	31.83	.01	4.82	.07	1.83
50	32.09	.15	8.26	.01	6.00
75	32.36	.19	8.90	.10	5.22
100	32.65	.12	8.92	.08	5.55
125	33.00	.05	8.83	.08	5.82
150	33.34	.05	7.33	.08	5.74
175	33.72	.04	6.78	.09	5.58
200	34.05	.06	5.34	.08	5.32
225	34.28	.04	4.58	.10	5.07
250	34.45	.05	3.48	.07	5.07
300	34.64	.05	3.22	.06	5.04
400	34.83	.04	2.93	.02	4.44

SUBAREA 3 - ESQUIMAN CHANNEL, NEWFOUNDLAND SHORE

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	5.21	7.22	7.73	1.80	1.29
10	4.87	6.87	7.82	1.58	1.36
20	4.00	5.60	8.02	.91	1.67
30	2.63	3.64	8.35	.13	3.21
50	.64	1.17	9.11	.38	5.18
75	.17	.45	10.15	.32	5.67
100	.63	.29	11.56	.14	1.07
125	1.53	.20	11.73	.32	1.70
150	2.64	.11	.77	.35	1.50
175	3.73	.05	2.91	.35	1.36
200	4.58	.04	6.02	.28	1.24
225	5.03	.14	7.53	.20	1.23
250	5.30	.19	7.39	.08	1.10
300	5.52	.19	8.02	.15	1.30

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	31.39	.78	1.59	.17	3.04
10	31.41	.62	1.72	.14	3.27
20	31.59	.39	2.29	.08	1.94
30	31.75	.24	2.94	.12	1.57
50	32.07	.03	.53	.00	2.50
75	32.52	.27	11.45	.19	5.67
100	32.86	.26	11.83	.19	5.78
125	33.08	.16	1.02	.06	.08
150	33.40	.25	1.47	.06	5.87
175	33.75	.19	1.41	.03	1.67
200	34.06	.15	.86	.02	3.47
225	34.28	.12	1.35	.07	.09
250	34.39	.06	.51	.07	5.64
300	34.39	.28	3.97	.15	1.40

SUBAREA 4 - ESQUIMAN CHANNEL, QUEBEC SHORE

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	4.34	6.72	7.70	1.84	1.39
10	3.92	6.22	7.81	1.58	1.53
20	2.77	4.61	8.20	.89	2.36
30	1.74	3.30	8.64	.81	3.21
50	.46	1.75	9.07	.31	3.46
75	.08	1.06	9.44	.13	3.55
100	.29	.73	10.23	.16	5.78
125	1.01	.64	10.45	.35	5.85
150	2.10	.60	9.91	.49	5.87
175	3.17	.69	9.44	.62	5.87
200	4.25	.17	9.83	.11	1.94
225	4.97	.13	1.67	.12	2.86
250	5.23	.08	5.58	.14	4.04

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	31.32	.80	1.46	.32	3.15
10	31.43	.69	1.61	.17	3.29
20	31.66	.49	2.24	.02	4.00
30	31.82	.36	2.73	.03	1.20
50	32.10	.23	3.39	.06	5.21
75	32.36	.11	3.91	.15	5.32
100	32.61	.08	4.36	.07	4.86
125	32.89	.02	6.89	.13	5.20
150	33.22	.04	.02	.11	5.41
175	33.56	.06	10.26	.15	5.44
200	33.94	.13	2.30	.14	4.03
225	34.24	.27	1.53	.15	3.98
250	34.40	.18	1.83	.07	4.54

SUBAREA 5 - JACQUES CARTIER PASSAGE

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	4.91	7.43	7.53	1.37	.93
10	4.01	6.42	7.77	.99	1.33
20	2.55	4.40	8.25	.65	3.16
30	1.45	2.84	8.67	.90	3.96
50	.31	1.29	9.32	.65	4.67
75	-.03	.70	9.70	.31	5.19
100	.18	.40	10.18	.33	5.80
125	.93	.25	11.06	.30	.49
150	1.99	.19	.71	.30	.58
175	3.17	.24	3.18	.27	.81
200	4.03	.19	3.17	.27	.49
225	4.62	.09	3.43	.18	5.99
250	4.91	.05	9.72	.23	5.45

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	31.03	1.12	.93	.68	2.68
10	31.26	.87	1.31	.39	2.76
20	31.60	.50	2.29	.14	2.08
30	31.78	.32	3.03	.19	1.76
50	32.05	.19	4.62	.17	1.87
75	32.31	.11	6.00	.03	1.59
100	32.62	.07	6.50	.06	5.55
125	32.95	.03	5.98	.09	.08
150	33.27	.04	4.24	.07	.81
175	33.64	.11	3.32	.08	.86
200	33.96	.14	3.19	.09	.65
225	34.21	.12	2.53	.01	6.00
250	34.34	.15	1.93	.08	4.96

SUBAREA 6 - NORTH WEST GULF

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	4.46	7.24	7.45	1.99	.94
10	3.43	5.62	7.66	.92	1.18
20	1.73	3.21	8.24	.57	4.00
30	.91	2.13	8.73	.75	4.34
50	.38	1.10	9.46	.53	4.82
75	.59	.50	10.77	.24	5.47
100	1.22	.36	.40	.13	.78
125	2.08	.31	.96	.14	1.35
150	2.93	.21	1.15	.11	1.26
175	3.62	.09	1.42	.10	1.85
200	4.15	.10	.94	.09	1.59
225	4.47	.09	.58	.01	2.86
250	4.69	.12	11.97	.02	2.79
300	4.91	.20	.27	.18	.10

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	30.57	1.38	.81	.33	3.31
10	30.89	.98	1.03	.14	3.34
20	31.38	.35	1.59	.12	1.25
30	31.72	.14	2.70	.09	1.04
50	32.15	.05	5.74	.04	4.86
75	32.58	.02	2.09	.02	.79
100	32.94	.05	3.04	.06	1.37
125	33.32	.07	2.13	.06	1.14
150	33.64	.08	2.06	.05	.50
175	33.92	.08	2.29	.05	.98
200	34.14	.08	1.70	.06	1.05
225	34.29	.07	1.15	.04	1.16
250	34.42	.06	.65	.03	1.26
300	34.60	.01	10.78	.03	.05

SUBAREA 7 - ESTUARY

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	3.39	4.75	7.06	.86	.36
10	2.54	3.32	7.33	.50	.52
20	1.97	2.34	7.79	.30	.79
30	1.45	1.66	8.28	.21	.12
50	.79	1.00	9.60	.33	5.63
75	.76	.82	10.93	.32	.51
100	1.42	.67	11.75	.39	1.30
125	2.17	.52	11.99	.43	1.63
150	2.86	.36	.54	.42	1.81
175	3.42	.30	1.24	.37	1.88
200	3.84	.26	1.38	.31	1.92
250	4.44	.25	1.63	.23	1.57
300	4.41	.20	.12	.21	5.21

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	27.72	2.21	11.38	.88	1.57
10	28.63	1.63	11.29	.48	1.23
20	29.70	1.00	11.46	.30	5.99
30	30.66	.60	10.98	.34	5.15
50	31.83	.25	9.67	.26	4.95
75	32.60	.19	11.09	.12	4.54
100	33.04	.18	10.69	.06	4.79
125	33.39	.15	10.21	.02	5.00
150	33.68	.09	10.87	.05	1.62
175	33.88	.05	11.60	.06	1.59
200	34.05	.03	.27	.07	1.60
250	34.31	.01	9.74	.08	1.62
300	34.42	.02	9.58	.01	1.83

SUBAREA 8 - GASPE

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	4.82	7.26	7.38	1.48	.86
10	3.97	6.11	7.57	.89	1.03
20	2.68	4.36	7.98	.18	2.82
30	1.77	3.04	8.36	.45	4.25
50	.71	1.55	9.30	.69	4.78
75	.55	.66	11.00	.19	5.14
100	1.02	.40	1.21	.06	2.34
125	1.77	.41	2.29	.15	2.43
150	2.67	.31	3.23	.25	2.62
175	3.44	.29	3.12	.25	2.34
200	4.03	.25	3.01	.23	2.21
225	4.45	.20	3.12	.19	2.34
250	4.74	.13	2.30	.13	1.91
300	4.81	.26	1.51	.24	.49

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	29.42	1.69	.50	.66	2.56
10	29.78	1.27	.67	.52	2.52
20	30.44	.74	1.36	.25	2.76
30	31.00	.43	2.03	.14	2.65
50	31.80	.14	3.62	.07	2.52
75	32.37	.06	5.03	.06	4.00
100	32.84	.05	5.87	.08	4.40
125	33.19	.08	5.84	.10	4.78
150	33.51	.11	5.46	.12	4.92
175	33.78	.09	4.65	.07	5.33
200	34.02	.06	5.10	.07	5.72
225	34.20	.07	3.46	.05	5.64
250	34.36	.06	2.52	.07	.39
300	34.56	.01	9.42	.05	.47

SUBAREA 9 - LAURENTIAN CHANNEL ANTICOSTI

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	4.58	7.00	7.68	1.47	1.00
10	3.86	6.14	7.88	.95	1.27
20	2.56	4.19	8.22	.15	5.14
30	1.55	2.82	8.69	.82	4.71
50	.26	1.40	9.41	.81	4.96
75	-.08	.77	9.66	.44	5.32
100	.48	.33	10.70	.27	5.06
125	1.35	.24	.46	.22	4.82
150	2.31	.20	1.52	.26	4.69
175	3.32	.17	.50	.20	4.56
200	4.12	.17	.26	.16	4.65
225	4.67	.20	11.85	.09	4.73
250	4.97	.21	11.35	.11	4.64
300	5.04	.18	.64	.07	.93

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	30.94	.91	1.23	.44	3.11
10	31.02	.78	1.31	.32	3.08
20	31.35	.42	1.77	.18	2.55
30	31.63	.16	3.03	.18	2.23
50	32.00	.12	6.66	.10	3.15
75	32.34	.17	8.52	.11	4.41
100	32.68	.03	7.63	.13	5.12
125	33.07	.01	2.74	.13	4.89
150	33.39	.06	2.97	.13	4.93
175	33.74	.03	2.38	.06	5.15
200	34.04	.02	2.42	.04	5.54
225	34.27	.06	1.55	.05	.35
250	34.43	.07	1.25	.03	.76
300	34.64	.03	7.92	.04	1.70

SUBAREA 10 - LAURENTIAN CHANNEL CENTRAL

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	5.46	7.88	7.63	1.49	1.11
10	4.74	7.18	7.75	1.12	1.22
20	3.31	5.04	8.03	.10	3.57
30	1.71	2.88	8.59	.92	4.46
50	.28	1.14	9.06	.88	5.07
75	.12	.78	8.52	.53	4.99
100	.74	.68	8.23	.50	5.10
125	1.60	.58	7.65	.41	4.90
150	2.54	.69	7.31	.36	4.95
175	3.53	.59	7.50	.41	4.95
200	4.27	.47	7.72	.39	5.00
225	4.76	.37	7.99	.33	4.92
250	5.01	.25	7.79	.23	4.81
300	5.10	.12	10.88	.14	3.73

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	31.02	.77	1.85	.17	4.85
10	31.15	.75	2.53	.23	5.49
20	31.32	.60	2.94	.21	5.75
30	31.54	.41	3.46	.12	5.90
50	31.96	.17	5.73	.06	3.89
75	32.34	.24	7.62	.20	4.67
100	32.74	.20	7.45	.20	4.99
125	33.15	.13	6.44	.19	4.71
150	33.53	.14	6.56	.13	4.68
175	33.87	.07	6.87	.10	5.19
200	34.12	.05	6.17	.12	5.53
225	34.31	.07	4.62	.13	5.70
250	34.44	.07	4.01	.10	5.90
300	34.65	.03	6.20	.06	.06

SUBAREA 11 - SHEDIAC VALLEY

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	5.99	7.84	7.51	1.03	.65
10	5.12	7.17	7.68	.71	.89
20	3.93	5.68	8.00	.16	2.74
30	2.74	4.23	8.42	.70	4.11
50	1.22	2.51	9.41	1.30	4.68
75	.68	1.52	10.02	1.19	5.21
100	1.13	1.59	10.58	1.82	5.43

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	29.55	1.70	.82	.48	2.32
10	29.73	1.55	1.07	.42	2.65
20	30.08	1.07	1.39	.28	2.17
30	30.50	.63	1.88	.32	1.94
50	31.23	.22	4.33	.29	1.72
75	31.89	.24	7.12	.17	2.58
100	32.23	.42	6.71	.14	2.94

SUBAREA 12 - NORTHWEST MAGDALEN SHALLOWS

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	5.99	8.23	7.54	1.42	.99
10	5.36	7.57	7.67	1.10	1.15
20	3.54	4.93	8.11	.48	3.56
30	1.86	2.81	8.79	1.15	4.28
50	.47	1.39	9.84	.96	4.85
75	.33	.60	9.84	.42	5.17
100	.31	.74	6.50	.64	3.81

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	30.22	1.42	1.32	.19	3.71
10	30.30	1.34	1.50	.21	4.20
20	30.68	.85	1.98	.16	.28
30	31.08	.43	2.65	.22	.71
50	31.64	.11	5.62	.07	.88
75	32.16	.10	8.05	.15	1.78

SUBAREA 13 - NORTHEAST MAGDALEN SHALLOWS

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	5.82	8.29	7.67	1.63	1.43
10	5.40	7.97	7.75	1.59	1.48
20	3.86	5.55	8.12	.66	2.76
30	1.96	3.04	8.81	1.13	4.28
50	.39	1.17	8.99	.72	5.10
75	.25	.60	8.23	.61	4.56

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	30.94	.90	1.56	.35	4.94
10	30.98	.92	2.02	.34	4.91
20	31.14	.67	2.38	.22	5.40
30	31.44	.32	3.25	.15	.31
50	32.04	.28	9.37	.09	3.27

SUBAREA 14 - NORTHUMBERLAND STRAIT WEST

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	6.88	9.96	7.51	.53	5.92
10	5.83	9.09	7.74	.10	2.05
20	3.69	8.14	7.91	1.79	3.84
30	2.94	4.50	8.67	1.17	3.75

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	28.96	1.02	1.33	.25	2.81
10	29.03	.83	2.37	.53	3.49
20	29.95	1.59	1.76	.37	1.42
30	30.70	1.08	2.03	.51	.69

SUBAREA 15 - SOUTHERN MAGDALEN SHALLOWS

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	6.78	8.85	7.60	1.78	.97
10	6.19	8.27	7.72	1.56	1.18
20	4.11	5.53	8.23	.70	3.06
30	2.11	3.15	9.00	1.15	4.11
50	.34	1.29	10.19	.72	5.29

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	30.02	1.24	1.97	.39	4.42
10	30.02	1.24	2.16	.40	4.67
20	30.38	.88	2.86	.28	5.65
30	30.74	.59	3.93	.18	.33
50	31.38	.21	6.29	.06	4.16

SUBAREA 16 - CAPE BRETON CHANNEL

TEMPERATURE

DEPTH	MEAN	ANNUAL AMPL.	ANNUAL PHASE	SEMI - ANNUAL AMPL.	SEMI - ANNUAL PHASE
0	7.07	9.17	7.92	1.82	.50
10	6.40	8.68	7.98	1.55	.75
20	4.56	6.20	8.38	.36	5.67
30	2.73	4.02	8.99	1.18	4.59
50	.88	1.83	9.64	1.17	5.03
75	.66	1.00	9.23	.76	5.11
100	1.32	.14	7.92	.11	5.66
125	2.44	.53	3.43	.31	2.41
150	3.31	.45	4.24	.31	2.71

SALINITY

DEPTH	MEAN	ANNUAL AMPL.	ANNUAL PHASE	SEMI - ANNUAL AMPL.	SEMI - ANNUAL PHASE
0	30.18	1.27	2.89	.37	2.26
10	30.28	1.28	2.93	.23	2.06
20	30.54	1.12	3.25	.31	1.69
30	30.84	.88	3.77	.44	1.79
50	31.33	.65	4.89	.56	2.17
75	32.14	.34	6.17	.07	2.22
100	32.82	.38	4.26	.30	2.19
125	33.30	.57	4.35	.29	2.27
150	33.63	.33	4.65	.26	1.83

SUBAREA 17 - NORTHUMBERLAND STRAIT EAST

TEMPERATURE

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	7.95	9.91	7.74	.92	1.05
10	7.35	9.58	7.93	.96	1.32
20	5.94	8.05	8.29	.65	2.36
30	3.85	5.72	8.95	1.17	3.91

SALINITY

		ANNUAL		SEMI - ANNUAL	
DEPTH	MEAN	AMPL.	PHASE	AMPL.	PHASE
0	29.11	.73	2.68	.10	2.73
10	29.14	.58	2.94	.15	1.75
20	29.35	.71	3.94	.13	3.03
30	29.91	.82	4.31	.19	2.98